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**IMPACT OF SUSTAINABILITY PRACTICES ON  
GUEST SATISFACTION AND LOYALTY**

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**ABSTRACT**

This study examines the impact of sustainability practices on guest satisfaction and loyalty in the Finnish hotel industry. The research analysed 580 survey responses from guests of a Finnish hotel group by using a quantitative approach. The study investigated how sustainability practices affect guest satisfaction and loyalty, how demographic factors influence perceptions of these practices, and which sustainability practices guests value most. The results demonstrated a positive relationship between sustainability practices and guest satisfaction, with hotel-led practices showing a stronger effect than those requiring guest participation. Demographic analysis revealed that female guests reported higher satisfaction with guest-participation sustainability practices than male guests, while guests with higher education levels reported lower satisfaction with hotel-led practices. Regarding practice preferences when it comes to choosing a hotel, socio-cultural and economic practices were rated significantly more important than environmental and communication practices. The findings suggest that hotels should prioritise sustainability measures that do not require direct guest participation and emphasise socio-cultural and economic efforts that guests can directly experience. This research contributes to the understanding of how sustainability practices influence guest satisfaction and loyalty in the hospitality and tourism sectors.

**KEYWORDS:** sustainability, guest satisfaction, guest loyalty, tourism, hotel industry, hospitality

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# 1. INTRODUCTION

## 1.1 Background

Tourism is one of the fastest-growing sectors globally, accounting for approximately 5% of global CO<sub>2</sub> emissions. Within this, the accommodation sector, including hotels, contributes around 20% of tourism-related emissions, amounting to about 1% of total global carbon emissions (UNWTO, 2023, p. 8). This is not surprising given the industry's significant reliance on non-renewable resources, such as fossil fuels for heating, cooling and electricity, and the use of non-durable products, including single-use toiletries and disposable packaging (Chan et al., 2014, p. 1). The tourism sector experienced significant setbacks during the COVID-19 pandemic, resulting in a drastic reduction in international tourist arrivals. While the pandemic temporarily lowered greenhouse gas emissions, the resumption of travel and other activities is expected to drive these emissions back up (Khatib, 2023, p. 78). The environmental impact, combined with growing consumer awareness of sustainability issues, has driven demand for more sustainable tourism. Research shows that travellers are increasingly drawn to hotels that have adopted comprehensive sustainable practices (Moise et al., 2018, pp. 92–93).

While implementing sustainability strategies can provide a competitive advantage for tourism businesses and hotels (Bianco et al., 2023, p. 2), their success depends on clearly communicating these initiatives to guests (Bernard et al., 2024, p. 741). Guests need to be aware of how these initiatives and practices are being implemented, as their effectiveness depends on customer knowledge. Therefore, there is an increasing need for open communication about the specific ways in which sustainability initiatives and practices are carried out in hotels (Abdou et al., 2020, p. 2). This highlights the crucial need for bolder measures to ensure that tourism becomes truly sustainable. Additionally, hotels can save money and resources by implementing sustainable practices. As a result, managing costs has created valuable opportunities to impact the environment positively. These actions include measures such as reducing water and energy consumption (Bruns-Smith et al., 2015, p. 1). Furthermore, as major stakeholders in the hospitality sector, hotels are expected to implement different sustainability practices to reduce their environmental impact. In addition, by doing so, hotels can also improve guest satisfaction and loyalty. The hospitality sector has been a leader in adopting Corporate Social Responsibility

(CSR) principles by integrating sustainable initiatives and practices across all aspects of its operations (Dral, 2023, p. 21).

This study evaluates how sustainability practices affect guest satisfaction and loyalty in the Finnish hotel industry. The research examines three key aspects: first, the relationship between sustainability practices and guest satisfaction; second, how these practices influence guests' likelihood to return; and third, which specific sustainability practices guests value most. The case company operates with a sustainability programme integrating environmental responsibility, social responsibility, corporate governance, and safety across its operations (Hotel Group A, 2024, p. 3).

As stated earlier, there is a growing demand for concrete sustainable actions, driven by increasing consumer awareness and regulatory requirements, such as the European Union's Corporate Sustainability Reporting Directive (CSRD), which requires large companies and listed small and medium-sized enterprises (SMEs) to disclose their social and environmental impacts to ensure transparency for investors and stakeholders (Directive 2022/2464; Odoabaša & Marošević, 2023, p. 593). This is vital then thinking about the tourism industry where this type of demand also has an impact. Sustainable practices are essentials for protecting the environment and meeting the expectations of eco-conscious travellers. In addition, the United Nations Sustainable Development Goals (SDGs), which are part of the 2030 Agenda for Sustainable Development, emphasise reducing inequality, improving health and education, promoting economic growth, and addressing climate change—all of which are closely aligned with the goals of sustainable tourism development (United Nations, 2024, pp. 1–2). The hotel industry in Finland has responded to these demands by adopting various types of sustainable initiatives and practices (Visit Finland, 2023, p. 8). This demonstrates that the hotel sector plays a crucial role in achieving these global sustainability targets through its environmental and social impacts.

## **1.2 Previous research**

The growing demand for more sustainable practices has led hotels to implement various initiatives aimed at reducing their environmental impact, improving social responsibility, and contributing to local economic development (Berezan et al., 2013, pp. 227–228). Sustainable

practices include measures such as recycling, using renewable energy sources, implementing sustainability certifications, promoting local hiring, using local materials, and offering sustainably produced food (Berezan et al., 2013, p. 227; Visit Finland, 2023, pp. 38–39). However, hotels have mostly implemented these sustainability practices without thoroughly examining how they may affect customer satisfaction and whether they have an impact on guests' choice of hotel (Millar & Baloglu, 2011, p. 303). This research gap highlights the need for studies that evaluate the effectiveness of sustainability initiatives and practices from the guest perspective.

This trend has also increased the need for studies examining the link between sustainability initiatives and guest satisfaction and loyalty. While such studies do exist, there are still relatively few that analyse the impact of sustainability initiatives and practices on guest satisfaction, revisit intention, and willingness to promote hotels through positive word-of-mouth (Moise et al., 2018, p. 93). Moreover, the relationship between sustainability efforts and guest satisfaction remains unclear, especially in the context of the hotel industry in Finland. Additionally, only a limited number of studies have thoroughly explored these relationships. It is also worth noting that these studies have reported mixed and sometimes inconclusive results on the impact of sustainability initiatives and practices on guest satisfaction and loyalty (Moise et al., 2018, pp. 93–94). For this reason, further research is needed to clarify these connections and provide more consistent insights into the effects of sustainable practices on guest behaviour.

More research is needed to better understand the factors and dimensions that influence guests' hotel choice decisions. Based on the findings by Bruns-Smith et al. (2015, p. 12), the top five reasons given by guests when choosing a hotel were convenience and location, price, previous experience, rewards program, and reputation. This study builds on that foundation. It uses a complete range of factors in its survey instrument to capture all the factors that influence decisions. These factors include hotel location, price, service quality, brand reputation, safety and security, accessibility, sustainability practices, sustainability certifications, reviews and ratings, and loyalty program benefits. By examining this expanded set of variables, the research aims to provide a better understanding of how traditional selection criteria interact with emerging considerations such as sustainability initiatives in shaping guest preferences and booking decisions.

Recent theoretical advances have begun to establish frameworks that link sustainability initiatives to guest satisfaction and loyalty. Han et al. (2019) investigated the impact of various sustainability initiatives on hotel guests' decision making and loyalty. The study highlighted the importance of fostering guest loyalty in order to increase profitability. The findings suggest that effective loyalty strategies should focus on enhancing guests' perceptions of sustainable practices and improving their overall experience during their stay, thus creating a stronger link between sustainability initiatives and guest satisfaction (Han et al., 2019, p. 25).

Moliner et al. (2019, p. 3) demonstrate that environmental sustainability improves the guest's experience of hotel services and facilities, which ultimately could contribute to the accommodation provider's goal of providing a satisfactory guest experience. This relationship is further supported by their finding that investment in environmental sustainability and guest engagement in sustainable practices directly improves the customer experience and indirectly improves satisfaction (Moliner et al., 2019, p. 9). Building on these findings, this study plans to examine how specific sustainable initiatives in hotels affect guest satisfaction and loyalty, with a particular focus on understanding which sustainable practices have the strongest impact on the overall guest experience.

Research has revealed complex patterns in how guests perceive and respond to sustainability initiatives. Kim et al. (2017, p. 229) found that environmentally conscious guests prefer green-certified hotels and are willing to pay premium prices for such accommodations. However, despite generally positive attitudes towards green practices, guests may be reluctant to participate in specific environmental initiatives that may affect their comfort or luxury experience.

Kusumawati et al. (2019, p. 281) indicated that tourists with a higher perception of sustainability in hotel operations exhibit greater revisit intention and positive word-of-mouth (WOM) recommendations than those with a lower perception. This finding is reinforced by Han et al. (2011, p. 354), who argue that hotels that prioritise sustainability were more likely to receive positive WOM recommendations. The researchers also found that this contributed to reputational benefits for hotels' sustainable operations (Han et al., 2011, pp. 345–346). Ham and Han (2013, p. 744) further established that sustainable initiatives could provide long-term

advantages for hotels, particularly when promotional efforts are strategically targeted at sustainability-conscious consumers.

The cultural context in which sustainability initiatives are implemented significantly influences their reception and effectiveness. Tideswell and Fredline (2004) studied how hotel strategies affect guest loyalty. The researchers found that focusing on local culture and unique experiences can make customers feel more connected to the area and the hotel (Tideswell & Fredline, 2004, pp. 205–206). This is particularly relevant in Finland, where diverse regional cultures and heritage play important roles in sustainable tourism development. For example, operating year-round not only supports the protection of local cultures but also allows the creation of permanent jobs, contributing to regional tax revenue and overall well-being (Uslu et al., 2020, pp. 2–3). For this reason, this research aims to explore whether guests staying in different regions of Finland have varying views on the importance of local culture and heritage, and how this impacts their overall satisfaction. This research could provide valuable insights into how regional cultural differences influence guest satisfaction and loyalty across Finland's geographical areas.

The communication of sustainability initiatives and practices represents another critical dimension affecting guest perceptions. While sustainable initiatives are known to enhance brand reputation and are often leveraged for marketing (Manaktola & Jauhari, 2007, p. 365), there is still limited insight into how these initiatives impact guest perceptions and behaviour, particularly in Finland. Additionally, differentiating genuine sustainability practices from “greenwashing” is important. Jakovele (2023, p. 32) found that some hotel managers view sustainable marketing practices as an educational tool aimed at improving transparency and supporting customer understanding, rather than as a direct strategy for generating more sales. This approach could influence guest perceptions and support for hotels that prioritise education over marketing, potentially increasing satisfaction and loyalty.

### **1.3 Research questions and objectives**

The primary aim of this research is to understand how sustainability initiatives and practices influence guest satisfaction and loyalty in the Finnish hotel industry, with a focus on identifying which initiatives guests value most. This study examines whether sustainable practices result

in higher guest satisfaction and increased likelihood of guest return or recommendation. The findings will provide valuable insights for the case company, enabling them to prioritise key sustainability initiatives and practices. This will support the company in building stronger, longer-lasting customer relationships and gaining a competitive advantage.

Based on the extensive literature review, which revealed mixed results and research gaps regarding the impact of sustainability practices on guest behaviour, particularly in the Finnish context, this study addresses the following primary research question:

*RQ1: How do sustainability practices affect guest satisfaction and loyalty?*

The research is further guided by these sub-questions:

*RQ2: How do demographic factors affect guest' perceptions of sustainability practices?*

*RQ3: Which sustainability practices are most valued by hotel guests?*

The study examines multiple dimensions of sustainability reflected in the survey, including environmental, socio-cultural, economic, and communication aspects. By analysing guests' responses to these sustainability practices, the research aims to address gaps identified in previous studies, which have often focused on only limited aspects of sustainability.

Furthermore, the research explores regional differences in sustainability perceptions across Finland, addressing findings that highlight the importance of local culture and unique experiences in fostering guest loyalty. The study also examines the role of sustainability practices in guests' decision-making when choosing a hotel. By addressing these research questions, this study will contribute both theoretical understanding to the hospitality literature and practical insights for hotel management strategies in Finland, particularly regarding how to effectively implement and communicate sustainability initiatives to enhance guest satisfaction and loyalty.

## 1.4 Data and research methodology

The study adopts a post-positivist approach, which acknowledges that objective reality can be approximated through empirical observation and measurement, while also recognising the influence of human bias (Creswell & Creswell, 2018, p. 12). A structured questionnaire is used to collect data from guests of the case company. Data was gathered through an online survey available in both Finnish and English to ensure inclusivity of loyalty members and international guests. The questionnaire included questions on sociodemographic information such as age, gender, nationality, education level, and occupation, as well as guest perceptions of the hotel's sustainability initiatives and practices, overall satisfaction with their stay, loyalty intentions such as the likelihood to return or recommend the hotel to others, and importance of sustainability factors when choosing a hotel.

The data analysis used several complementary statistical methods to examine the relationships between sustainability initiatives, guest satisfaction, and loyalty. First, descriptive statistics were used to analyse demographic and travel characteristics. Principal Component Analysis (PCA) was then used to identify the underlying dimensions of sustainability practices, categorising them into environmental, socio-cultural/economic, and communication components. Correlation analyses (Pearson's  $r$  and Spearman's  $\rho$ ) and linear regression were used to test relationships between satisfaction with sustainability practices and outcome variables including overall satisfaction, return intention, and recommendation likelihood. Chi-square tests examined associations between demographic factors and satisfaction with sustainability practices. To compare the relative importance of different sustainability dimensions, mean ratings with 95% confidence intervals were calculated and visually compared for statistical significance.

The research followed strict ethical guidelines, ensuring the anonymity and voluntary participation of respondents in accordance with the Finnish Advisory Board on Research Integrity (TENK, 2023). Data was collected and securely stored using the Webropol survey platform provided by the University of Lapland. Informed consent was obtained from all participants prior to their participation in the survey.

## **1.5 Structure of the study**

This thesis is divided into seven chapters and provides a comprehensive examination of the relationship between sustainability practices, guest satisfaction and loyalty in the hotel industry in Finland. Chapter 1 introduces the research topic, provides background information on sustainability in the hospitality industry and establishes the significance of the study. It outlines previous research in the field, identifies research gaps, presents the research questions and objectives, and briefly describes the methodological approach. Chapter 2 establishes the theoretical framework that guides the research. It begins by explaining the post-positivist research paradigm and then explores key concepts including sustainability in hospitality, sustainability initiatives and practices, frameworks that guide sustainable hospitality such as the triple bottom line and stakeholder theory, guest behaviour in relation to sustainability, and the relationship between sustainability, guest satisfaction and loyalty. Chapter 3 develops the theoretical model and research hypotheses based on the literature review. Six hypotheses are formulated to address the research questions, examining the relationships between sustainability practices and guest satisfaction, loyalty, demographic factors and the relative importance of different types of sustainability practices. Chapter 4 details the methodology used in the study, including a description of the case company and its sustainability practices, data collection processes, survey design and implementation, data analysis methods and ethical considerations. Chapter 5 presents the empirical findings of the study through a systematic analysis. It begins with descriptive statistics of the demographic and travel characteristics of the sample, followed by the results of the principal component analysis and analyses that address each research question and test the proposed hypotheses. Chapter 6 discusses the empirical findings in relation to the theoretical framework and previous research, interpreting the results and highlighting their significance for both theory and practice. Chapter 7 concludes the thesis by summarising the main findings, discussing their theoretical and practical implications, acknowledging the limitations of the study and suggesting directions for future research on sustainability in the tourism industry. This structure ensures a logical progression from establishing the research context and theoretical foundations to presenting and interpreting the empirical findings. By ultimately providing meaningful insights into how sustainability practices influence guest satisfaction and loyalty in the Finnish hotel industry.

## **2. THEORETICAL FRAMEWORK**

This chapter outlines the theoretical concepts that guide the research, clarifying how different sustainability initiatives and practices influence the overall guest experience, satisfaction, and loyalty, as well as how these factors affect guest behaviour.

### **2.1 Research paradigm**

This study adopts a post-positivist paradigm, which is defined as a research approach that recognises the complexity and subjective nature of social phenomena while aiming to maintain scientific rigour through empirical observation and measurement (Jennings, 2010, p. 38). In this paradigm, the researcher accepts that absolute objectivity may not be fully achievable but strives to approximate reality through systematic data collection and analysis (Leavy, 2017, p. 92). Based on this approach, a theoretical model was developed using existing theories and previous studies as a foundation. The model includes several hypotheses, which were tested using statistical analysis, in line with the post-positivist practice of empirical testing. This approach balances scientific objectivity with recognition of the challenges inherent in the study of human behaviour (Jennings, 2010, pp. 38–39).

### **2.2 Sustainability in hospitality**

Sustainability is widely recognised as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987, p. 43). Initially, sustainability was primarily associated with environmental concerns. However, contemporary perspectives emphasise its multidimensional nature, integrating economic, environmental, and socio-cultural dimensions.

In the hospitality industry, specifically, implementing sustainability faces unique challenges. Goldstein and Primlani (2012, p. 3) note that “while other aspects of the hospitality sector are relatively straightforward to record and interpret, sustainability has remained intrinsically difficult to quantify.” This difficulty stems from the complex interplay of environmental initiatives, such as energy efficiency and waste reduction, social responsibility, including

community engagement and fair labour practices, and economic viability (Jones et al., 2016, p. 36).

Sustainability in the hotel industry is structured around three interconnected pillars: environmental, socio-cultural, and economic. Environmental sustainability focuses on minimising environmental impact through actions such as monitoring resource consumption, redesigning products, and improving operational processes (Olya et al., 2021, p. 47). In hotels, this includes energy conservation, water management, waste reduction, and carbon footprint minimisation. Socio-cultural sustainability aims to enhance the well-being and safety of employees, guests, suppliers, and local communities by ensuring safe working conditions, fair trade practices, employee training, and fostering long-term stakeholder relationships (Olya et al., 2021, p. 47). For hotels in Finland, this dimension includes preserving local culture, supporting community initiatives, and maintaining responsible labour practices. Economic sustainability ensures profitability and market growth while minimising negative social and environmental impacts. Achieving economic sustainability involves balancing stakeholder interests with responsible resource management, ensuring that profitability is pursued without compromising the sustainability of resources or the well-being of society (Dyllick & Hockerts, 2002, p. 133).

Effective communication practices serve as a critical bridge between these three pillars, facilitating transparency and stakeholder engagement. Communication is the mechanism through which hotels inform guests, employees and other stakeholders about their sustainability initiatives and progress towards sustainability goals. This includes reporting on environmental impacts, showcasing social responsibility programmes, and disclosing economic sustainability practices (Font & McCabe, 2017, p. 874). Without effective communication, even the most effective sustainability practices may go unnoticed by guests and other stakeholders, reducing their potential impact on guest satisfaction and loyalty. Research has shown that hotels that effectively communicate their sustainability initiatives not only enhance their reputation but also increase guest awareness and potential participation in these initiatives and practices (Berezan et al., 2013, p. 227). In recent years, the political dimension has been added to the three pillars mentioned above (Jones et al., 2016, p. 40). This addition reflects the increasing role of governments and regulators in shaping sustainability policies through legislation,

various types of incentives and international agreements, which in turn influence business strategies and consumer expectations (Olya et al., 2021, pp. 44–45).

A common misconception is that sustainability is only about “green practices,” focusing primarily on environmental concerns. However, true sustainability requires a balanced approach that incorporates all dimensions simultaneously. Within the hotel industry, sustainability efforts must consider a wide range of factors, from reducing carbon emissions and improving waste management to ensuring fair labour practices and supporting local economies.

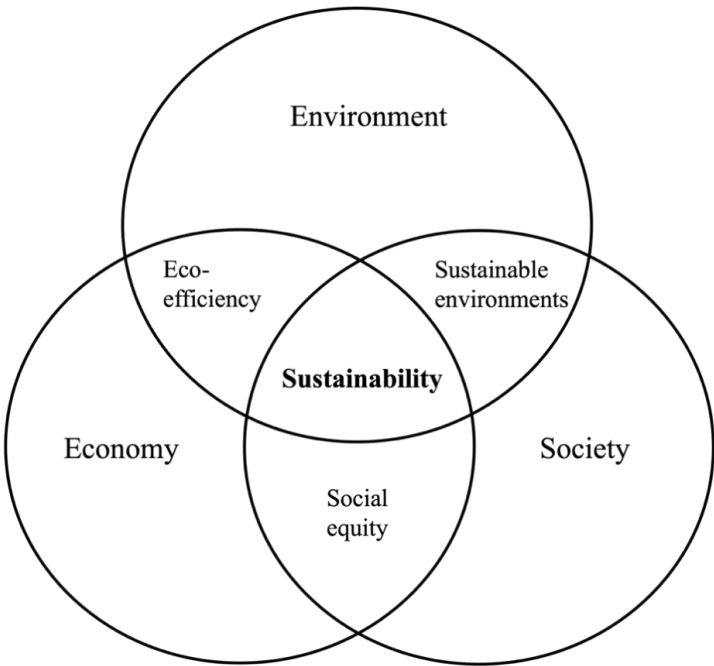


Figure 1. The three pillars of sustainability. Source: Curran, 2009, p. 8.

As shown in Figure 1, sustainability is only fully realised when a company addresses all three dimensions simultaneously, with communication practices acting as the connective tissue that integrates these efforts. For the Finnish hotel industry in particular, this integrated approach is crucial, given the country’s strong environmental values, its priorities in preserving cultural heritage and its economic development goals in the tourism sector. Effective communication of sustainability initiatives is particularly important in the Finnish context, where transparency and authenticity in environmental claims are highly valued by consumers (Häikiö, 2014, p. 5646).

## **2.3 Sustainability initiatives and practices in hospitality**

In the hospitality sector, sustainability initiatives usually refer to high-level strategic efforts or programmes designed to achieve sustainability goals, which often align with industry-wide objectives and global trends (Jones et al., 2016, p. 40). These initiatives function within a complex and evolving governance ecosystem which incorporates diverse approaches to promoting sustainable development in global value chains (OECD, 2024, p. 8).

By contrast, sustainability practices represent the day-to-day operational activities undertaken to maintain sustainable operations. These practices are tangible and routine actions that directly stem from broader initiatives (Khatter et al., 2019, pp. 2394–2395). For example, an initiative such as achieving carbon neutrality might involve specific practices such as installing solar panels to reduce reliance on fossil fuels, training staff to monitor and optimise energy usage, and partnering with sustainable suppliers to source eco-friendly products (Chen et al., 2022, p. 2291). This distinction is important as it clarifies the different levels of commitment and implementation within organisations. While initiatives outline long-term sustainability goals, practices focus on immediate and measurable actions that contribute to achieving these goals.

Dyllick and Hockerts (2002) define sustainable hospitality as “hospitality industry development and management that meets the needs of today’s guests, hoteliers, and stakeholders without compromising the ability of future guests, hoteliers, and stakeholders to enjoy the benefits from the same services, products, and experiences” (p. 131). For research purposes, the term “sustainability practices” is often preferred, as it focuses on the concrete actions’ organisations take rather than broad commitments. This research also adopts the term “sustainability practices” in the survey and in reporting, while recognising that these practices contribute to broader sustainability goals. This term is used throughout the study because it most accurately reflects the activities at an operational level that have a direct impact on guest experiences, satisfaction and loyalty.

## **2.4 Frameworks guiding sustainable hospitality**

The Triple Bottom Line (TBL) framework, introduced by John Elkington (1997), was instrumental in expanding corporate thinking beyond pure financial metrics to include

environmental and social impacts (Elkington, 1997, pp. 49–51). However, recent critiques highlight significant limitations in its practical application. Milne and Gray (2013, pp. 13–14) argue that organisations often reduce TBL to a mere reporting tool rather than integrating sustainability into core business strategies, which has resulted in superficial commitments. Elkington himself has expressed concerns about the framework’s effectiveness, arguing that the concept should be “recalled” due to its failure to drive systemic change (Elkington, 2018, p. 5). More contemporary approaches to sustainability emphasise integrated thinking and practical implementation. The United Nations Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) frameworks offer more structured approaches to sustainability implementation. These frameworks provide more precise metrics and accountability mechanisms, addressing the quantification challenges identified in earlier approaches.

As sustainability has gained importance in the hospitality industry, companies have increasingly committed to strategic corporate sustainability agendas (Jones et al., 2016, p. 38). This commitment is closely linked to Corporate Social Responsibility (CSR), a framework that emphasises the role of businesses in contributing to societal well-being through responsible and ethical practices. CSR suggests that companies can generate long-term value by integrating sustainability strategies into their operations (Kramer & Porter, 2006, p. 84). It also refers to a company’s commitment to improving societal well-being by balancing economic, social, and environmental concerns through various actions (Kotler & Lee, 2002, p. 10). According to Kramer and Porter (2006, p. 80), sustainability initiatives not only reduce a company’s environmental footprint but also provide a competitive advantage. Businesses can strengthen their market position by responding to the growing consumer demand for environmentally responsible services (Moise et al., 2018, p. 93).

However, the motives behind implementing CSR and driving sustainable actions are being questioned. Some customers feel that companies sometimes overstate their sustainability efforts, using sustainability as a marketing strategy rather than demonstrating a genuine commitment. Font and McCabe (2017, p. 872) support this concern, noting that some marketing activities, particularly advertising, have been criticised for greenwashing. This refers to misleading consumers about a company’s environmental impact for business gains (Delmas & Burbano, 2011, pp. 65–67). Critics argue that this trend has led to the rise of “green

consumerism,” where sustainability is marketed as a lifestyle choice rather than a real solution to environmental problems (Jones et al., 2016, p. 41). Similarly, Ditlev-Simonsen (2021, p. 37) argues that corporations exploit sustainability concerns to generate new revenue streams rather than making fundamental changes to their business practices. Nevertheless, these concerns have led many companies to re-evaluate their sustainability practices and, through legislation, integrate these agendas into their operations, making it easier to implement and conduct more sustainable business. This is evident in the growing number of hotels adopting sustainable practices in recent years (Moise et al., 2018, p. 94).

Stakeholder theory provides a valuable framework for understanding how hotels can balance the diverse interests affected by their sustainability initiatives. As Wheeler et al. (2003, p. 16) explain, stakeholder theory centres on the belief that “companies should be sensitive to the interests and concerns of a wide variety of stakeholders, including suppliers, customers and society at large, as well as those of their shareholders, and that this will ultimately enable them to enjoy greater long-term business success.”. In the context of sustainable hospitality, stakeholder theory helps explain why hotels must consider the varying perspectives of guests, employees, local communities, investors, and regulatory bodies when implementing sustainability initiatives. For Finnish hotels specifically, this means recognising the cultural importance of sustainability to local communities, the financial expectations of investors, the experiential desires of guests, and the regulatory requirements of government authorities. The theory suggests that hotels that effectively balance these stakeholder interests through their sustainability practices will achieve better long-term outcomes than those focused solely on shareholder returns. This multi-stakeholder perspective is particularly relevant for analysing how sustainability practices might impact guest satisfaction and loyalty, as guests themselves represent a key stakeholder group whose interests must be aligned with the hotel’s sustainability strategy.

## **2.5 Guest behaviour in relation to sustainability**

When examining how sustainability initiatives influence guest behaviour in hotels, Ajzen’s (1991) Theory of Planned Behaviour (TPB) provides a useful framework. TPB suggests that, in addition to personal attitudes, both subjective norms, such as societal expectations of sustainable travel and perceived behavioural control, such as the ease of participating in hotel

sustainability programmes can have a huge impact in shaping guests' intentions and actual behaviour. According to TPB, three key components influence behavioural intentions and resulting actions: attitudes toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991, p. 182). This theory is relevant for understanding how guests make decisions about choosing and returning to hotels based on their sustainability practices. For example, a guest may have a positive attitude toward staying at an eco-friendly hotel but may be influenced by societal expectations about luxury or convenience that conflict with this attitude. Similarly, their perceived ability to engage with sustainability initiatives during their stay may impact their ultimate behaviour.

Steg and Vlek (2009, p. 309) define sustainable consumer behaviour as individual actions in the consumption of products or services that are either neutral or beneficial to the environment. These actions aim to preserve both natural and social resources, going beyond environmental protection to include actions that benefit society. At its core, sustainable behaviour reflects a lifestyle guided by values and personal responsibility, where individuals make conscious choices that consider the wellbeing of both present and future generations. This approach recognises that individual actions have broader implications for environmental conservation and social welfare (Pinho & Gomes, 2023, p. 3).

Guest engagement represents another crucial aspect of sustainable tourism practices. Hotels actively work to involve their guests in sustainability efforts by encouraging towel and linen reuse, promoting water-conscious behaviours such as shorter showers, supporting recycling programmes, and providing education about sustainable practices (Berezan et al., 2013, p. 227; Kim et al., 2017, p. 230). This engagement helps create a more participatory approach to sustainability. The community impact dimension of sustainable tourism extends beyond the hotel premises. This includes supporting local products and services, promoting sustainable transportation options such as public transport and cycling, engaging in community initiatives, and preserving local culture and heritage (Moise et al., 2018, pp. 93–94). Hotels implementing these comprehensive practices not only reduce their environmental impact but also create meaningful opportunities for guests to participate in sustainable tourism actively. This holistic approach to sustainability helps create a more responsible tourism industry while enhancing the overall guest experience (Moliner et al., 2019, p. 15).

The Sustainable Travel Report by Booking.com indicates a growing global interest in sustainable travel. The report found that there is an increasing focus on reducing the environmental impact of travel in the future (Booking.com, 2023, pp. 11–12). Practices such as minimising energy consumption and reusing linen in accommodation have gained popularity. Despite this enthusiasm, challenges remain as many travellers still perceive sustainable options as more expensive and are starting to show some signs of sustainability fatigue and disengagement (Booking.com, 2024, p. 3). This creates a complex dynamic where positive attitudes toward sustainable tourism do not always translate into concrete actions.

However, there is a notable willingness among travellers to invest in experiences certified as sustainable, demonstrating a shift towards accepting higher costs for environmentally responsible choices (World Economic Forum, 2023). To build on this, the evidence suggests that when travellers do engage in sustainable practices, they report better-quality travel experiences and increased awareness of their own environmental impact (Booking.com, 2024, p. 11). This shifting dynamic presents both challenges and opportunities for the hospitality industry as it attempts to balance guest expectations with sustainable initiatives.

## **2.6 Guest satisfaction and loyalty in sustainable hospitality**

Guest satisfaction is a multi-dimensional concept that reflects how satisfied the guest is with the product or service. This satisfaction can be influenced by guest expectations and how well those expectations are met (Preziosi et al., 2022, p. 3). Guest satisfaction is important for business success, especially in the service and hospitality sector (Moise et al., 2018, p. 94). In the hospitality sector, overall guest satisfaction is based on the overall hotel experience, which includes the combination of different elements such as accommodation and services (Pizam & Ellis, 1999, p. 330). Furthermore, as said guest satisfaction in the hospitality context is not a binary concept but is shaped by multiple factors. Over time, approaches to measuring satisfaction have evolved from the use of single-item overall satisfaction indicators to the adoption of more comprehensive, multidimensional models that assess different aspects of the guest experience (Pizam et al., 2016, p. 125). Satisfaction with sustainability practices represents a distinct, yet integrated, dimension of overall satisfaction. Guests may evaluate environmental initiatives differently from traditional hospitality elements such as comfort or service quality (Han & Yoon, 2014, p. 23).

In addition to guest satisfaction, another important measurement and goal for success is guest loyalty. Guest loyalty is one of the most critical factors for long-term success in competitive sectors such as tourism and hospitality (Moise et al., 2018, p. 95). Loyalty is often seen as having two dimensions: behavioural and attitudinal. The behavioural dimension looks at what guests have done in the past, and the attitudinal dimension looks at what they plan to do in the future (Moise et al., 2018, p. 95). Since there are two dimensions, it is important to consider that relying only on the behavioural dimension, which does not take into consideration the attitudinal aspect, may result in an imperfect classification. This approach fails to differentiate between loyal guests and those who make repeated purchases of a product or a service out of habit (Moise et al., 2018, p. 95). Therefore, the inclusion of the attitudinal dimension of guest loyalty adds the factor of positive attitude towards the brand or supplier and the willingness of guests to recommend the brand or supplier to others (Zeithaml et al., 1996).

Satisfaction and loyalty are closely related concepts, and satisfaction can be seen as a positive factor of guest loyalty (Anderson and Srinivasan, 2003, p. 2). Lam et al. (2004, p. 296) also argue that satisfied guests are more likely to repurchase the service and recommend it to others through positive word-of-mouth. In the hospitality context, the relationship between satisfaction and loyalty has been studied extensively, but the findings remain somewhat mixed (Moise et al., 2018, p. 96). Therefore, in this research, these two concepts will be analysed separately, and each of them will have its own hypothesis formulated accordingly.

### **3. THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT**

#### **3.1 Theoretical model**

Previous research has identified several connections between sustainability practices, guest satisfaction, and loyalty within the hospitality industry. As outlined in Chapter 2, the theoretical framework emphasises that hotel sustainability encompasses environmental, socio-cultural, and economic dimensions (Olya et al., 2021, p. 47). Guest responses to these practices are influenced by their attitudes, subjective norms, and perceived behavioural control as suggested by the Theory of Planned Behaviour (Ajzen, 1991, 182). Furthermore, sustainability practices may influence both guest satisfaction and multiple dimensions of loyalty, while demographic factors may moderate these relationships.

The research questions, initially introduced in Chapter 1, are addressed in this study through specific hypotheses. Research Question 1 asks, “How do sustainability practices affect guest satisfaction and loyalty?”, This question is examined through Hypotheses 1, 2, and 3 (H1, H2, and H3). Research Question 2 investigates, “How do demographic factors affect guests’ perceptions of sustainability practices?”, This is explored through Hypotheses 4 and 5 (H4 and H5). Finally, Research Question 3 focuses on, “Which sustainability practices are most valued by hotel guests?”, This question is linked to Hypothesis 6 (H6).

#### **3.2 Research hypotheses**

Based on the previous research, research questions and objectives of the study, the following hypotheses have been developed. The first hypothesis is that sustainability practices have a positive association with guests’ overall satisfaction. Hotels worldwide compete to attract and retain guests by enhancing their experience quality. Implementing sustainability practices represents one approach to improving guest experiences by meeting evolving expectations for responsible tourism. Previous literature has shown that guest satisfaction is influenced by how well their expectations are met (Preziosi et al., 2022, p. 3; Pizam & Ellis, 1999, p. 330). As sustainability awareness grows globally, guests increasingly expect hotels to demonstrate environmental, socio-cultural and economic responsibility. Hotels that effectively implement and communicate sustainability initiatives may therefore enhance the overall guest experience

and satisfaction. Several studies have indicated that guests with positive perceptions of a hotel's sustainability efforts report higher overall satisfaction (Moliner et al., 2019, p. 15; Berezan et al., 2013, p. 227). Based on these aspects, the following hypothesis can be formed:

*H1: There is a positive relationship between hotels' sustainability practices and overall guest satisfaction.*

In line with the first hypothesis, the second hypothesis proposes that guest satisfaction with sustainability practices positively influences their intention to return. The hospitality literature has established that satisfaction is a significant predictor of repeat patronage (Anderson & Srinivasan, 2003, p. 2; Lam et al., 2004, p. 296). When guests are satisfied with their hotel experience, including sustainability aspects, they are more likely to choose the same hotel for future stays. This represents the behavioural dimension of loyalty as conceptualised by Pritchard and Howard (1997). Furthermore, guests who value sustainability are particularly likely to seek out hotels that align with their personal values for repeat visits, creating a stronger loyalty effect among sustainability-conscious guests. Research findings indicate that sustainability can be a differentiating factor in competitive markets, enhancing both satisfaction and repeat visit intentions (Moise et al., 2018, p. 94). Based on these assumptions, the following hypothesis can be formed:

*H2: Guest satisfaction with sustainability practices positively correlates with guests' intention to return to the hotel.*

The third hypothesis proposes that guest satisfaction with sustainability practices influences positive word-of-mouth behaviour. Satisfied guests not only return but become advocates, sharing their experiences with friends, family, and increasingly through online reviews and social media platforms. This advocacy behaviour is particularly valuable as potential guests often trust peer recommendations more than traditional marketing messages (Litvin et al., 2008, p. 460). When guests appreciate a hotel's sustainability practices, they are more likely to highlight these aspects when recommending the property to others, amplifying the hotel's sustainability message. Studies have shown that environmentally conscious guests often become vocal advocates for hotels that demonstrate strong environmental and social

responsibility (Han et al., 2018, p. 61). Based on this understanding, the following hypothesis is proposed:

*H3: Guest satisfaction with sustainability practices positively correlates with guests' willingness to recommend the hotel to others.*

The fourth hypothesis suggests that demographic characteristics influence how guests evaluate sustainability practices. Consumer behaviour research has established that personal characteristic, including age, education level, current occupation, affect how individuals perceive and value sustainability (Ajzen, 1991, p. 182; Booking.com, 2023, pp. 11–12). For example, certain age groups may place higher importance on environmental concerns, while others may prioritise social responsibility. Research has shown that younger generations and those with higher education levels often demonstrate greater awareness and concern for sustainability issues (World Economic Forum, 2023). Furthermore, the theory of consumption values explains that individuals evaluate products and services based on their functional, emotional, and social value, which are influenced by personal values and demographic background (Sheth et al., 1991, p. 160). These values influence not only how sustainability practices are perceived but also how much they weigh in decision-making. Understanding these demographic influences can help hotels tailor their sustainability communications and offerings to resonate with different guest segments. Based on these considerations, the following hypothesis is proposed:

*H4: Guests with different demographic characteristics show significant differences in their evaluation of hotel sustainability practices.*

The fifth hypothesis proposes that a hotel's geographical location within Finland influences guests' perceptions of sustainability practices. Finland has diverse regional characteristics, from urban centres to nature-oriented destinations in Lapland, which may shape both implementation of and expectations for sustainability practices. In urban settings, guests might prioritise energy efficiency and waste reduction, while in natural settings, guests might place higher value on conservation efforts and local community support. Additionally, different regions may attract different visitor profiles with varying sustainability expectations. Local environmental conditions and cultural contexts can influence how sustainability is implemented and perceived

(Cornelisse, 2020, p. 53). Based on these contextual considerations, the following hypothesis is formulated:

*H5: Guests' perceptions of sustainability practices vary significantly based on the geographical location of the hotel in Finland.*

This hypothesis posits that among the three pillars of sustainability, environmental practices are perceived by guests as the most significant. The theoretical framework underscores the necessity of balancing environmental, socio-cultural, and economic dimensions of sustainability (Olya et al., 2021, p. 47). However, empirical research indicates that guests often exhibit heightened awareness and concern for environmental aspects. These environmental practices are more prominently associated with the concept of sustainability in public discourse. Studies have demonstrated that guests are more likely to notice and appreciate environmental efforts compared to social or economic sustainability measures (Han, 2021, pp. 1023–1024; Bruns-Smith et al., 2015, pp. 4–5). Sustainable communication practices, such as displaying environmental certifications and providing detailed information on hotel websites, play a crucial role in improving guests' recognition and valuation of these practices. Transparent communication not only informs guests but also strengthens the hotel's commitment to environmental sustainability, thereby influencing guest satisfaction and loyalty. Based on these considerations, the following hypothesis is proposed:

*H6: Environmental sustainability practices are rated as more important to guests than socio-cultural, economic, or communication sustainability practices.*

#### **4. METHODOLOGY, DATA AND RESEARCH ETHICS**

This study uses a quantitative approach to assess the impact of sustainability practices on guest satisfaction. In addition, the study examines the likelihood that guests will return or recommend the hotels based on these sustainability factors. Data for this research was collected using a structured questionnaire consisting of a total of 23 questions, as shown in Appendix 1. A total of 580 complete and valid responses were collected for analysis. In order to provide an in-depth analysis, the survey also included socio-demographic factors such as nationality, age, gender, occupation and level of education.

This study uses a quantitative approach to assess the impact of sustainability practices on guest satisfaction, loyalty and intention to return using a post-positivist paradigm as the approach and a questionnaire as the primary data collection method. Post-positivism is a belief system that originated in the natural sciences. It emphasises an objective, structured and discoverable reality (Leavy, 2017, p. 12). Using this method allows the researcher to maintain objectivity and value neutrality throughout the testing process (Jennings, 2010, p. 37) as the data collected is numerical and can be analysed statistically. This approach also limits the researcher's personal bias. This ensures that the results reflect actual trends in the data rather than subjective interpretations. In addition, a post-positivist approach supports the use of a deductive method (Leavy, 2017, p. 92). This allows to build on theories about guest satisfaction and loyalty in the context of sustainable tourism. For this reason, this study adopts a deductive approach, starting with a theoretical framework and testing specific hypotheses developed from it (Leavy, 2017, p. 92).

The questionnaire was completed online, with an emphasis on ensuring respondents' anonymity. As highlighted by Leavy (2017, p. 17), it is vital to ensure that respondents feel comfortable answering potentially sensitive topics. For this research, these included personal opinions on the hotel's sustainability initiatives and behavioural intentions the survey was conducted while protecting respondents' personal information. The survey included pre-defined questions and used a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) to limit the range of responses. The five-point Likert scale is considered to be less confusing than the seven- or nine-point scale and was therefore chosen. The five-point scale allows respondents to understand the questions more easily and give more accurate answers (Joshi et al., 2015, pp. 398–399). This approach allowed for the collection of quantifiable data on guests'

attitudes toward sustainability practices. In addition, it allowed to measure guests' perception of specific sustainable practices. Another advantage of this method is that it enables the collection of a wide range of data from a large sample of guests, thereby improving the reliability of respondents' answers.

#### **4.1 The case company**

This study focuses on a Finnish hotel operator known for its sustainability efforts, referred to as Hotel Group A to preserve its anonymity. Background information was obtained from the company's Annual Sustainability Report 2023–2024, which was provided by the group's sustainability representative and approved for use as valuable background information in the study. Collaboration with the company included communication with their sustainability representative, who provided access to internal materials, assisted in refining the survey, and supported the data collection process.

Sustainability practices in hotels can be categorised according to the framework previously discussed in Chapter 2, with specific actions falling under the environmental, socio-cultural, economic and communication dimensions. Table 1 provides an illustrative categorisation of the sustainability practices implemented by the case company for this research, aligned with the dimensions identified in the study's principal component analysis. It should be noted that these categories have been modified and structured specifically for the purposes of this study to better reflect their functional impact and to align with how guests perceive and experience these practices. This adaptation allows for a more meaningful analysis of how these practices influence guest satisfaction and loyalty.

Table 1. Categorisation of sustainability practices in Hotel Group A.

Category	Practice/Initiative	Description
Environmental	Energy management	Use of 100% green electricity (hydro, wind, or bioenergy)
Environmental	Waste management	Comprehensive recycling and sorting programs, including biowaste recycling
Environmental	Circular economy practices	Recycling and repurposing of furniture, textiles, and other materials
Environmental	Transportation	Charging stations for hybrid and electric cars
Environmental	Environmental protection	Participation in sustainable nature tourism with Metsähallitus's Parks & Wildlife Finland
Environmental	Food waste management	Avoidance of disposable packaging and repurposing of food waste
Socio-cultural/ Economic	Local food sourcing	Use of local food producers and suppliers; preference for local ingredients, including herbs grown on-site
Socio-cultural/ Economic	Year-round employment	Employing staff year-round and investing in staff training and development
Socio-cultural/ Economic	Community engagement	Long-term commitment to the local community
Socio-cultural/ Economic	Local sourcing and collaboration	Sourcing products from local suppliers and collaborating with sustainability-focused partners
Socio-cultural/ Economic	Customer safety and responsibility	Commitment to customer safety through regular training and devotion to safety regulations
Socio-cultural/ Economic	Support for local economy	Hiring local staff and paying local taxes to support community development
Communication	Sustainability reporting	Public reporting of sustainability results
Communication	Certification and standards	Obtained EcoCompass certificate & STF label
Communication	Transparency	Clear communication about sustainability practices on hotel website and booking platforms

Source: Adapted from Hotel Group A, Sustainability Programme and Report, 2024. Categories modified for analytical purposes in this study.

Environmental initiatives include energy management through the use of 100% green electricity (hydro, wind or bioenergy), comprehensive waste management including recycling and sorting programmes, circular economy practices including furniture and textile recycling, transport solutions such as charging stations for hybrid and electric cars, environmental protection

through participation in sustainable nature tourism with Metsähallitus' Parks & Wildlife Finland, and sustainable food practices including avoiding disposable packaging and reusing food waste (Hotel Group A, 2024).

Socio-cultural and economic initiatives include local food sourcing with a preference for local ingredients and suppliers. These year-round employment practices invest in staff training, community engagement through partnerships with organisations such as Metsähallitus and Keep Lapland Tidy Association, sourcing products from local suppliers and working with sustainability-focused partners, customer safety and responsibility demonstrated through regular training and devotion to safety regulations, and supporting the local economy by employing local staff and paying local taxes to support community development (Hotel Group A, 2024).

Communication practices serve as the critical link between these pillars, ensuring that sustainability efforts are effectively communicated to guests and other stakeholders. Hotel Group A implements communication strategies, including public reporting of sustainability results, such as environmental impact and energy consumption. This is achieved by obtaining and displaying certifications, such as the EcoCompass certificate and the Sustainable Travel Finland (STF) label, as well as disclosing sustainability information on its website and booking platforms (Hotel Group A, 2024).

## **4.2 Data collection**

The data collection process for this study took place between January and February 2025, targeting guests who had stayed at the case company's hotels. To maximise response rates and ensure a diverse sample of participants, the survey was distributed through multiple channels. A primary method was post-stay communication, where a survey link was included in the standard post-stay letters sent to guests following their visit. This approach allowed feedback to be collected while guests' experiences were still fresh, capturing their immediate impressions of the sustainability practices they encountered during their stay. Another distribution method was to share the survey through the company's official social media pages, including Facebook and Instagram. This helped extend the survey's reach to a broader audience, including followers

and individuals with an interest in the brand. The social media posts included a brief description of the research's purpose and a direct link to the survey.

Data was collected using the Webropol survey platform provided by the University of Lapland, which ensured secure data storage and compliance with privacy regulations. All responses were automatically compiled in an anonymised database for subsequent analysis. The survey remained open for 4 weeks. A total of 581 responses were collected, of which 580 were complete and valid for analysis. According to Hair et al. (2010, p. 176), a sample size greater than 500 is considered “very good” for most research purposes, providing sufficient statistical power for complex analyses. Therefore, this sample size was sufficient for conducting robust statistical tests and drawing meaningful conclusions. The evaluation of the sample’s representativeness was conducted by comparing the survey respondents’ demographics with the general customer base of Hotel Group A. It was found that most respondents typically belong to the same demographic groups as the hotel’s usual clientele, making the sample generally representative of the hotel’s customer base. As mentioned prior to conducting the survey, most of the loyalty club members are Finnish, and this is reflected in the respondents of the survey as well.

#### **4.3 Survey design and implementation**

The survey was structured to gather relevant data about how sustainability practices impacted guest satisfaction and loyalty at the case company, which can be seen in Appendix 1. This chapter outlines the methodology used for designing the survey, ensuring that it captured comprehensive and meaningful insights from participants.

Before participants began answering the survey questions, they were presented with a consent statement: “I consent to participate in this research and allow my responses to be analysed.”. The statement clearly indicated that if they did not consent, they would not be able to proceed with the survey. By actively confirming their consent, participants acknowledged their understanding of the research terms and willingness to participate.

After the introduction, the survey begins to collect information about the respondent’s hotel experience. This section includes questions about the main purpose of their stay, whether it was

for leisure/holiday, business, or other reasons. Respondents are asked about their previous experiences with the case company, the length of their stay and which specific hotel location they visited. The section also explores the factors that influenced their choice of hotel which was aimed to provide insights into the guest's decision-making process.

The second section of the survey aimed to gather respondents' views on sustainability practices in the hospitality industry. It focused on understanding the importance of sustainability practices in hotel selection and respondents' willingness to pay a premium for sustainable features. For question 6 (How important were these factors in selecting the case company?), several items were adapted from Bruns-Smith et al.'s (2015) study, "Environmental Sustainability in the Hospitality Industry: Best Practices, Guest Involvement and Customer Satisfaction". For question 7 (How important are these sustainability practices to you when choosing a hotel to stay in?), the measurement items were based on Moise et al.'s (2018) study, "Effects of Green Practices on Guest Satisfaction and Loyalty". Additional items were drawn from the case company's sustainability practices, as described on its website and in its sustainability report.

For question 8 (Would you be willing to pay a little more to stay in a hotel that...), the measurement items were also informed by the case company's current sustainability practices to assess respondents' willingness to pay more for sustainable features. Respondents were also asked about their perceptions of green hotels in their home country to provide context for their expectations and experiences. As Zou et al. (2009, p. 2) argue, culture influences individuals by shaping their understanding of what is collectively accepted as true. This question aimed to explore what respondents perceived as common, recognising that these perceptions may vary and are subjective rather than based on actual data. These insights were valuable in understanding respondents' attitudes and expectations towards sustainability in hotels.

The third section of the survey focused on measuring guest satisfaction and loyalty. Respondents were asked about their overall satisfaction with their experience, their satisfaction with sustainable features during their stay, their likelihood to return and how sustainability practices influenced their intention to return. For question 11 (How satisfied were you with the following sustainable features during your stay?), the same approach was used as for question 7. For Question 14 (Please rate your likelihood of...), the measurement items were adapted from

Moise et al. (2018), with additional items to assess the likelihood of recommending the hotel and sharing positive feedback about the hotel's sustainability practices. The fourth section of the survey consisted of open-ended questions designed to collect qualitative data, providing a deeper understanding of respondents' opinions and suggestions.

Finally, socio-demographic data were collected. In this section, respondents were asked about their age, gender, country of residence, level of education and current occupation, as these factors were considered relevant to the survey. Respondents had to be at least 18 years old to participate. If the "under 18" option was selected, the respondent was automatically taken to the end of the survey and could not answer any further questions. For gender, the survey offered five options: female, male, non-binary, prefer not to say or other. This inclusive approach was taken to ensure respondent friendliness. For variables such as age, gender, country of residence and the specific hotel where the respondent stayed, it was recognised that categories might need to be expanded if there were insufficient responses in each group.

An incentive was offered to increase the response rate. An incentive was also provided because a low response rate can lead to non-response bias, which occurs when the people who do not respond to a survey differ significantly in their characteristics or opinions from those who do respond. This bias can distort the results and make them unrepresentative of the whole population, potentially distorting the results and undermining the validity of the research (Malthus, 2017, p. 24).

The survey is being conducted in Finland and will be available in both Finnish and English. Since most loyalty members are Finnish, offering the survey in Finnish ensures that they have the opportunity to respond comfortably in their native language. Additionally, it is crucial that respondents fully understand the questions being asked and are able to provide accurate and reliable answers. For this reason, clear and simple terms were used and explained throughout the survey. Another reason for this approach was to minimise the response burden by only including the items that were essential. "Response burden" refers to the cognitive effort, time and resources required by respondents to understand and respond to survey questions or participate in data collection activities (Malthus, 2017, p. 22). It is important to make sure that respondents answering the questions feel that the response options are relevant to them. This

helps to get useful information that can be used to achieve the aim of the research (Silen, 2024, p. 26).

Finally, a potential source of bias in the data collected is the phenomenon of social desirability bias. This refers to the tendency of individuals to respond in a way that they believe is socially acceptable or favourable, rather than reflecting their true opinions or behaviour (Zerbe & Paulhus, 1987, p. 251). In the context of this study, respondents may have overemphasised their appreciation of sustainability practices or underemphasised less socially acceptable preferences, particularly due to increasing normative pressures around environmental and ethical behaviour. According to Chung and Monroe (2003, pp. 293-294), this bias can be particularly pronounced in ethical decision-making contexts, where people want to appear more moral than they may actually be. The authors also note that the extent of this bias can vary depending on the perceived ethicality of the scenario and personal factors such as gender (Chung & Monroe, 2003, p. 295). Although efforts were made to design the questionnaire in a neutral and anonymous way to reduce this bias, it should still be recognised as a potential limitation when interpreting results based on self-reported data.

#### **4.4 Data analysis**

The data collected through the survey was analysed using SPSS version 28.0.0.0. The analysis process followed several methods to ensure the consistency and reliability of the findings. Firstly, the data was cleaned and prepared for analysis by checking for missing values, outliers and inconsistencies. Responses with significant missing data were removed from the analysis, resulting in 580 valid responses from the original 581 collected.

The analysis began with descriptive statistics to provide an overview of sample characteristics and response patterns. Means, standard deviations, medians, minimum and maximum values, frequencies and percentages were calculated for demographic variables, trip characteristics and key measures. These descriptive statistics provided initial insights into the distribution of the data and helped to identify patterns in guests' perceptions of sustainability practices.

Principal component analysis (PCA) was then used to identify the underlying dimensions of hotel sustainability practices. PCA was applied to both importance ratings of sustainability

practices and satisfaction with sustainability features, resulting in distinct components that formed the basis of subsequent analyses. Both correlation and linear regression analyses were used to address the research questions regarding the relationships between sustainability practices and guest outcomes. Pearson's correlation coefficient ( $r$ ) was used to assess the strength and direction of linear relationships between variables, while Spearman's rank correlation coefficient ( $\rho$ ) provided a non-parametric alternative that did not rely on the assumption of a normal distribution. Linear regression analysis complemented these correlation methods by assessing the predictive power of satisfaction with sustainability practices on guest satisfaction and loyalty intentions. Chi-square test was used to examine associations between categorical variables, in particular to explore how demographic factors relate to satisfaction with sustainability practices. For these tests, the original five-point satisfaction scale was recoded into three categories to ensure sufficient cell counts and statistical reliability. To compare the relative importance of different sustainability dimensions (environmental, socio-cultural/economic and communication), mean scores with 95% confidence intervals were calculated and visually compared for statistical significance. This method allowed for the identification of meaningful differences in how guests perceived and prioritised different sustainability practices.

#### **4.4 Research ethics and ethical considerations**

As highlighted by the Finnish Advisory Board on Research (TENK), ethical research is based on the principles of reliability, respect, and accountability (TENK, 2023, p. 11). These principles were also prioritised in this research to ensure that participants' ethical concerns were maintained throughout the entire research process. Data was collected according to TENK's guidelines, emphasising participant rights, confidentiality, and voluntary, anonymous participation (TENK, 2023). The survey was conducted anonymously using the Webropol survey and reporting platform provided by the University of Lapland. The research follows the principles of research integrity throughout the research process and in the presentation of its results. The grammar of the thesis was checked using a tool called Grammarly. According to the University of Lapland's "Guidelines for Using Artificial Intelligence-Based Tools", this practice is permitted for proofreading and ensuring structurally correct language. In this research, this method was used to improve the clarity and readability of the text.

## **5. EMPIRICAL RESULTS OF THE STUDY**

### **5.1 Descriptive statistics**

This section presents the demographic profile and residence characteristics of the survey respondents. Descriptive statistics were used to organise and summarise the demographic and stay characteristics of survey respondents, allowing for clear identification of patterns across variables. This approach provides a foundation for understanding the basic composition of the sample before examining relationships between these variables (Nick, 2007, p. 33).

#### *5.1.1 Demographic and travel characteristics*

Table 2 provides a detailed breakdown of respondents' country of residence. The dominance of Finnish respondents (93.3%) is in line with Hotel Group A's expectations regarding survey participation patterns. Although Hotel Group A serves many international customers, the data confirms their previous observation that Finnish guests are significantly more likely to respond to their surveys. In total, only 39 respondents (6.7%) were from countries other than Finland.

Table 2. Respondents' country of residence.

Variables	Categories	n	%
Country of residence (n=580)	Finland	541	93.3
	France	6	1.0
	United Kingdom	4	0.7
	Belgium	4	0.7
	Ireland	4	0.7
	Germany	3	0.5
	Netherlands	3	0.5
	Poland	3	0.5
	Sweden	1	0.2
	Italy	1	0.2
	Switzerland	1	0.2
	China	1	0.2
	Japan	1	0.2
	United States	1	0.2
	Austria	1	0.2
	Czech Republic	1	0.2
	Denmark	1	0.2
	Estonia	1	0.2
	Indonesia	1	0.2
	Malaysia	1	0.2

The country of the respondents was deliberately excluded from the analysis due to the overrepresentation of Finnish respondents and insufficient data from other countries. This methodological choice was made to maintain statistical robustness, as any cross-country comparisons would be significantly limited by the sample distribution. The cultural dimension, which refers to the influence of national and cultural backgrounds on individuals' perceptions, values, and behaviours, was therefore not included. This will be addressed as a potential area for future research in the limitations section.

Table 3 offers additional demographic information about the respondents. This provides a more complete profile of the guests who participated in the study.

Table 3. Background information of the respondents.

Variables	Categories	n	%
Country of residence (n=580)	Finland	541	93.3
	Other countries	39	6.7
Gender (n=580)	Male	219	37.8
	Female	347	59.8
	Other/Not Specified	14	2.4
Age (n=580)	18–24	25	4.3
	25–34	110	19.0
	35–44	170	29.3
	45–54	137	23.6
	55–64	111	19.1
	65 or over	27	4.7
Education level (n=580)	Primary education	438	75.5
	Secondary education	23	4.0
	Bachelor's degree	57	9.8
	Master's degree	21	3.6
	Doctoral degree	31	5.3
	Other professional qualification	10	1.7
Current occupation (n=580)	Full-time employee	438	75.5
	Part-time employee	23	4.0
	Self-employed	57	9.8
	Student	21	3.6
	Retired	31	5.3
	Unemployed	4	0.7
	Other	6	1.0

Table 3 provides an overview of respondents' demographic characteristics, including country of residence, gender, age, education level, and current occupation. Among the respondents, 59.8% were female and 37.8% male, while 2.4% preferred not to disclose their gender. This suggests some gender imbalance, possibly indicating that women are either more likely to participate in surveys or are more often the ones making bookings at Hotel Group A. In terms of age, the largest groups were 35–44 years (29.3%), 45–54 years (23.6%), and 55–64 years (19.1%). The 25–34 age group accounted for 19.0% of responses, while only 4.3% were 18–24 and 4.7% were 65 or older. This suggests that most guests are middle-aged, with fewer

respondents in the younger and older age groups. Regarding education, 75.5% had completed primary education. Smaller shares held a bachelor's degree (9.8%), doctoral degree (5.3%), secondary education (4.0%), or a master's degree (3.6%). This suggests that the guests mainly have a practical or vocational educational background. In terms of occupation, 75.5% were full-time employees, followed by self-employed individuals (9.8%), retirees (5.3%), part-time workers (4.0%), and students (3.6%). This finding supports the earlier conclusion that most respondents are working adults, which is consistent with the dominant age groups.

Beyond demographics, understanding guests' travel behaviours and patterns provides an important context for interpreting their sustainability preferences. Table 4 shows the key travel-related characteristics of the respondents.

Table 4. Travel characteristics of the respondents.

Variables	Categories	N	%
Hotel Group A Loyalty member (N=580)	Yes	176	30.3
	No	404	69.7
Previous stays at Hotel Group A (N=578)	First time	209	36.1
	1-2 times	180	31.1
	3-5 times	102	17.6
	over 5 times	88	15.2
Duration of stay (N= 578)	1 night	424	73.4
	2-3 nights	114	19.7
	4-7 nights	39	6.7
	More than 7 nights	1	0.2
Purpose of stay (N=579)	Leisure/Holiday	459	79.3
	Business	109	18.8
	Other	11	1.9
Hotel region (N=578)	Uusimaa	143	24.7
	Lapland	104	17.9
	North Savo/North Ostroboth- nia	93	16.0
	Pirkanmaa	232	40.0
	Multiple/Unkown	8	1.4

Table 4 shows the stay-related information including loyalty membership, previous stays, duration, purpose of stay, and hotel region. As shown in Table 4, Most respondents (69.7%) were not members of Hotel Group A's loyalty program, which could suggest that a large portion of guests are casual visitors. In terms of visit frequency, 36.1% reported that this was their first

stay at Hotel Group A. Additionally, 31.1% had stayed 1–2 times, 17.6% had visited 3–5 times, and 15.2% had stayed more than five times. These numbers indicate a mix of new and returning guests. The typical stay was short, with 73.4% of respondents staying for just one night. A further 19.7% stayed for two to three nights, while just 6.7% stayed for four to seven nights. Just 0.2% reported stays of over a week. The main reason for travel was leisure, as 79.3% of respondents cited holiday or personal reasons for their stay. Business travel accounted for 18.8%, and only 1.9% selected “other”. As for location, guests most frequently stayed in the Pirkanmaa region (40.0%), followed by Uusimaa (24.7%), Lapland (17.9%), and North Savo/North Ostrobothnia (16.0%).

### 5.1.2 Sustainability practices satisfaction and loyalty intentions

This section explores how sustainability practices influence guest satisfaction and loyalty intentions at Hotel Group A. The questions in this section covered the importance of various factors in hotel selection, the significance of sustainable features in hotel selection, and guests’ willingness to pay a premium for sustainable features.

To understand the relative importance of sustainability in guests’ decision-making process, respondents were asked: “How important are the following factors when choosing a hotel to stay in?”. Respondents evaluated each factor on a five-point Likert scale, from “Not at all important” to “Very important”.

Table 5. Importance of factors in hotel selection (n=580).

Factors	Mean	Median	Std. Deviation	Min.	Max.
Service quality	4.13	4.00	0.75	1	5
Location	4.03	4.00	0.86	1	5
Safety and Security	3.95	4.00	0.94	1	5
Reviews and Ratings	3.64	4.00	0.98	1	5
Brand reputation	3.58	4.00	1.03	1	5
Price	3.42	3.00	0.92	1	5
Sustainability Practices	3.24	3.00	1.06	1	5
Sustainability Certifications	2.89	3.00	1.10	1	5
Loyalty Program	2.82	3.00	1.25	1	5
Accessibility	2.29	2.00	1.18	1	5

As shown in Table 5, guests prioritised traditional hospitality factors when selecting a hotel to stay, with service quality, location and safety ranking highest in importance. Service quality (M=4.13), location (M=4.03), and safety (M=3.95) emerge as the primary drivers of hotel choice, while sustainability practices (M=3.24) and sustainability certifications (M=2.89) rank particularly lower, placing seventh and eighth respectively, among ten factors. This positioning of sustainability factors is an interesting finding of this research, as it suggests a discrepancy between the industry’s growing emphasis on sustainability and guests’ actual priorities. These results contribute to the ongoing academic discussion about the role of sustainability in consumer decision-making within the hospitality industry. As shown in Table 5, the standard deviations provide further insight into guest preferences. The relatively low standard deviation for service quality (SD=0.75) suggests a strong consensus among guests regarding its importance. In contrast, the higher variability for sustainability practices (SD=1.06) indicates more diverse opinions on this factor. This could be due to differences among guest segments in terms of environmental concern or interest in sustainability.

To gain a deeper understanding of which specific sustainability practices are most important to guests, respondents were asked: “How important are these sustainability practices to you when choosing a hotel to stay in?”, using the same five-point importance scale as in the previous question. Table 6 examines the relative importance of different sustainability practices in hotel selection.

Table 6. Importance of sustainability practices in hotel selection (n=580).

Sustainability Practice	Mean	Median	Std. Deviation	Min.	Max.
Local suppliers	3.97	4.00	0.90	1	5
Year-round staff employment	3.89	4.00	0.96	1	5
Local food producers	3.85	4.00	0.98	1	5
Local community commitment	3.54	4.00	1.07	1	5
Waste recycling	3.34	3.00	1.07	1	5
Circular economy	3.23	3.00	1.06	1	5
Sustainability communication	3.06	3.00	1.06	1	5
Sustainability reporting	2.99	3.00	1.09	1	5
100% green electricity	2.83	3.00	1.08	1	5

A noteworthy finding from Table 6 reveals guests clearly prioritise socio-cultural and economic sustainability practices over environmental and communication practices. The highest-rated

practices were using local suppliers (M=3.97, SD=1.03), maintaining year-round staff employment (M=3.89, SD=1.04), and supporting local food producers (M=3.85, SD=1.05). All reflecting concerns with local economic impact and social responsibility. By contrast, environmental and communication-focused practices such as using 100% green electricity (M=2.83, SD=1.25) and publishing sustainability reports (M=2.99, SD=1.21) received the lowest ratings, indicating guests place less importance on behind-the-scenes environmental efforts. This preference pattern offers valuable insights for hotel sustainability strategies. Guests appear more likely to engage with and value sustainability measures that deliver visible local impacts and tangible social benefits rather than more abstract or less directly experienced environmental actions.

While importance ratings provide valuable insights into guest preferences, willingness to pay for sustainable practices provides a more concrete measure of how these preferences might translate into consumer behaviour. Respondents were asked: “Would you be willing to pay a bit more to stay at a hotel that...?” with response options of “No,” “Maybe,” and “Yes” for various sustainability practices. Table 7 presents findings on guests’ willingness to pay more for different sustainability practices.

Table 7. Willingness to pay more for sustainability practices (n=580).

Willingness to pay more for a hotel that:	No (%)	Maybe (%)	Yes (%)
Prioritises staff wellbeing and fair employment	9.31	35.34	55.34
Supports local businesses and preserves local culture	11.72	39.48	48.79
Maintains and renovates existing buildings	13.97	39.83	46.21
Actively reduces waste and provides recycling	22.41	48.28	29.31
Follows sustainable food practices	25.34	45.86	28.79
Compensates for carbon emissions	33.45	51.03	15.52
Holds recognised Sustainability Certifications	37.76	50.34	11.90
Uses 100% renewable energy	41.21	47.24	11.55

The results of the willingness-to-pay analysis in Table 7 reinforce the pattern seen in the importance ratings, highlighting a clear preference for socio-cultural and economic sustainability over environmental and communication practices. Over half of the respondents (55.34%) were willing to pay extra for hotels that support staff wellbeing, whereas only 11.55% were willing to do so for hotels that use 100% renewable energy. The lower willingness to pay for environmental practices (11–15%) compared to socio-cultural or economic ones (46–55%)

highlights the need for hotels to emphasise the practices that guests value most effectively. Guests also do not appear to value sustainability certifications highly enough to be willing to pay more for hotels that have them.

To understand how sustainability experiences influence overall satisfaction, respondents rated their satisfaction with specific sustainable features. The question asked was: “How satisfied were you with the following sustainable features during your stay?” using a five-point scale from “Very dissatisfied” to “Very satisfied”. This section also included a question about their overall satisfaction with the hotel stay. Table 8 presents data on satisfaction with both the overall experience and specific sustainable features encountered during guests’ stays.

Table 8. Satisfaction with hotel experience and sustainable features (n=580).

Experience/Feature	Mean	Median	Std. Deviation	Min.	Max.
Overall experience	4.50	5.00	0.62	1	5
Locally sourced food	4.38	5.00	0.74	1	5
Refillable bathroom amenities	4.26	4.00	0.87	1	5
Linens changed on request only	4.13	4.00	0.84	1	5
Digital alternatives	4.01	4.00	0.81	1	5
Skip daily room cleaning option	3.94	4.00	0.88	1	5
Water-saving fixtures	3.78	4.00	0.94	1	5
Information on sustainable tourism	3.66	4.00	0.80	1	5
Waste recycling practices	3.60	4.00	0.81	1	5
Eco-friendly transport options	3.59	3.00	0.84	1	5
Waste sorting facilities	3.53	4.00	0.89	1	5

The satisfaction data in Table 8 provides valuable insights into hotel sustainability management. Firstly, the high overall satisfaction score (M=4.50), despite lower ratings for specific sustainability features, suggests that sustainability practices neither enhance nor detract from the guest experience. Guests reported the highest satisfaction with locally sourced food (M=4.38), which aligns with their preference for practices that have a local economic impact. This corresponds with Hotel Group A’s socio-cultural practice of “local sourcing” (Table 1), such as growing herbs on site, suggesting that visible, tangible efforts are appreciated. It is notable that more interactive features, such as locally sourced food and refillable amenities, received higher ratings than less visible infrastructure efforts, such as waste sorting or green transport. This suggests that sustainability practices are more effective when they enhance the guest experience. Satisfaction with optional housekeeping (M=3.94) is also notable, given that

it involves reducing traditional services. This result may reflect growing guest acceptance of service changes that support sustainability goals, indicating a potential shift in expectations.

Finally, to assess the relationship between sustainability and loyalty, respondents rated various loyalty intentions on a five-point scale from “Very unlikely” to “Very likely”. They were also specifically asked: “Does the hotel’s sustainability practices influence your likelihood to return?” using the same scale as in previous questions.

Table 9. Guest loyalty and recommendation intentions (n=580).

Likelihood Measure	Mean	Median	Std. Deviation	Min.	Max.
Return to hotel for future stays	4.52	5.00	0.71	1	5
Say positive things about hotel to others	4.44	5.00	0.69	1	5
Recommend hotel to others	4.42	5.00	0.73	1	5
Share positive experiences about hotel’s sustainability practices	3.18	3.00	1.03	1	5
Recommend hotel for its sustainability practices	3.04	3.00	1.02	1	5
Sustainability practices influence on likelihood to return	2.80	3.00	1.22	1	5

The loyalty metrics in Table 9 reveal an interesting finding for this research. There is a significant difference in the mean scores for general loyalty intentions (M=4.42–4.52) and sustainability-specific loyalty (M=2.80–3.18). Combined with the high standard deviation for the impact of sustainability on the likelihood of returning (SD=1.22), this difference suggests significant variation in the impact of sustainability on guest loyalty. Overall, the limited impact of sustainability on loyalty paints a more complex picture of its business value. From a business perspective, the low score for return intentions based on sustainability (M=2.80) challenges the notion that sustainability directly leads to guest loyalty. Instead, sustainability may be viewed as an expected basic standard or a feature that only matters to certain types of guests.

### 5.3 Principal component analysis results

Before conducting any further analysis, a principal component analysis (PCA) was performed to identify the underlying dimensions of sustainability practices in hotels. PCA is a multivariate technique used to reduce the dimensionality of data by transforming interrelated variables into a smaller number of uncorrelated variables called principal components, which retain most of

the original information (Abdi & Williams, 2010, p. 433). The Direct Oblimin rotation method was applied because it allows the extracted factors to correlate. This approach is supported by previous research, where sustainability dimensions in hospitality are often found to be interrelated rather than fully independent (Hair et al., 2010, pp. 106–107; Berezan et al., 2013, p. 229).

PCA focused on exploring how sustainability practices were perceived in terms of their importance when choosing a hotel and satisfaction with those practices. The analysis was guided by the categorisations introduced in Chapter 2 and presented in Table 1. These initial groupings, environmental, socio-cultural, and economic practices, were based on the questionnaire items. However, since communication practices on sustainability had emerged as an important aspect, it was included as one of the main components. The aim was to test whether the observed data supported this structure and whether the items could be meaningfully grouped into factors for further analysis.

PCA was used to examine the underlying structure of sustainability practices in hotels, categorised as environmental, socio-cultural/economic, or communication. This analysis was based on responses to question 7 of the survey: “How important are these sustainability practices to you when choosing a hotel to stay in?”. All categories showed a one-component solution, suggesting that guests perceive the sustainability practices within each category as interrelated.

Table 10. Results of three separate PCA for sustainability practice dimensions (n=580).

Item	Environmental Practices	Socio-cultural / Economic Practices	Communication Practices
Use of 100% green electricity	.902		
The hotel's waste recycling and sorting practices	.894		
The hotel's circular economy practices (e.g., recycling of furniture and textiles)	.849		
Use of local food producers and suppliers and re-purposing food waste		.874	
The hotel employs staff year-round and invests in staff training		.844	
Long-term commitment to the local community, including partnerships with organisations like Metsähallitus		.843	
The hotel sources products from local suppliers and collaborates with sustainability-focused partners		.907	
The hotel's public reporting of sustainability results (e.g., environmental impact, energy consumption)			.948
Clear communication about sustainability practices on hotel website and booking platforms			.948
Number of Items	3	4	2
Cronbach's Alpha	.857	.887	.888

*Note: This table presents the results of three separate principal component analyses, each of which identifies one component for each sustainability dimension. Empty cells indicate that the item was not included in that particular analysis.*

As can be seen in Table 10, the environmental practices category, which included items related to green electricity, recycling, and circular economy practices, loaded strongly onto a single component, with high loadings ranging from .902 to .849. The reliability of this scale was confirmed with a Cronbach's Alpha of .857, indicating good internal consistency among the three items. Similarly, the socio-cultural/economic practices category, consisting of items concerning local food sourcing, year-round staff employment, community commitment, and collaborations with local suppliers, also loaded strongly onto a single component. The loadings for these items ranged from .843 to .907, demonstrating strong cohesion within this dimension. The Cronbach's Alpha for this four-item category was .887, indicating high reliability. For the communication practices category, the analysis showed a strong one-component solution for items related to sustainability reporting and communication of practices on the hotel's website and booking platforms, with both items having identical loadings of .948. This two-item category demonstrated excellent reliability, with a Cronbach's Alpha of .888. These results suggest that hotel sustainability practices are perceived by guests as coherent sets of actions

within distinct categories. The strong loadings and high reliability coefficients indicate that the scales constructed for each dimension are internally consistent and suitable for further analysis, particularly in examining the relationships between the perceived importance of sustainability practices, guest satisfaction and loyalty.

Unlike the predefined categories used for analysing the sustainability initiatives implemented by the hotel, the satisfaction-related items were analysed using PCA without grouping them into theoretical dimensions beforehand. Instead, the analysis identified underlying dimensions based on how respondents perceived and rated their satisfaction with different sustainable practices. Two components emerged from the data which can be seen on Table 11.

Table 11. Principal structure of hotel sustainability feature satisfaction (n=580).

Item	Hotel Participation Sustainability practices	Guest Participation Sustainability practices
Digital alternatives to physical or paper materials	.617	
The hotel's waste recycling and sorting practices	.905	
Water-saving toilets, faucets and showerheads	.755	
Waste sorting and recycling facilities	.894	
Option to skip daily room cleaning		.810
Towels and linens changed on request only		.895
Refillable bathroom amenities (soap & hair care products)		.700
Locally sourced and seasonal food available at the hotel's restaurants		.431
Information about sustainable tourism and local culture	.602	
Accessible and easily available eco-friendly transport options	.540	
Number of Items	6	4
Cronbach's Alpha	.836	.758

As seen on Table 11, the first component includes satisfaction items related to the hotel's infrastructure and service-level sustainability features, such as water-saving systems and recycling facilities. This component was labelled "Hotel Participation Sustainability practices". The second component included items that require direct guest involvement, such as skipping daily room cleaning or choosing when towels and linens are changed. This component was labelled "Guest Participation Sustainability practices". Both components showed acceptable internal consistency, with Cronbach's alpha values of 0.836 and 0.758, respectively.

Table 12. Sum variables based on PCA – Summary (n=580).

Item	Mean	Median	Std. Deviation	Min.	Max.
Guest Participation Sustainability practices	4.29	4.00	0.69	1	5
Hotel Participation Sustainability practices	3.74	4.00	0.69	1	5
Environmental Practices	3.13	3.00	0.95	1	5
Socio-cultural/Economic Practices	3.81	4.00	0.85	1	5
Communication Practices	3.02	3.00	1.02	1	5

Table 12 summarises the results of the principal component analysis (PCA). These sum variables were used for further analysis. As can be seen in Table 12, “Guest Participation Sustainability practices” received the highest mean score of 4.29, with a standard deviation of 0.69. This indicates that it was considered the most important factor, with low variability in responses. “Hotel Participation Sustainability practices” had a mean score of 3.74 and a standard deviation of 0.69, indicating that it was considered moderately important, with a similar degree of variability. Socio-cultural/Economic practices had a mean score of 3.81 and a standard deviation of 0.85, indicating moderate importance and slightly higher variability in responses. Environmental practices showed the greatest variation, with a mean score of 3.13 and a standard deviation of 0.95, suggesting more diverse perceptions of their importance. Communication practices received the lowest mean score of 3.02 and the highest standard deviation of 1.02, suggesting that these were considered the least important factor, with the greatest variability in responses.

#### **5.4 Impact of sustainability practices on guest satisfaction and loyalty**

To address the first research question (RQ1: How do sustainability practices affect guest satisfaction and loyalty?), the following hypotheses were formulated in Chapter 3. The first hypothesis, H1, states: There is a positive relationship between hotels’ sustainability practices and overall guest satisfaction. This hypothesis aims to examine whether guests who perceive the hotel’s sustainability efforts positively also report higher levels of satisfaction with their stay. Since H2 and H3 explore similar relationships and can be tested using the same analytical method, they are also introduced here, with results presented in the following section. H2 proposes that guest satisfaction with sustainability practices positively correlates with guests’ intention to return to the hotel. H3 suggests that guest satisfaction with sustainability practices positively correlates with guests’ willingness to recommend the hotel to others. Together, these

hypotheses form the basis for analysing the impact of sustainability practices on both guest satisfaction and loyalty-related behavioural intentions.

To test these hypotheses, two different correlation analyses were conducted. Correlation was used to explore the strength and direction of the relationship between perceived sustainability practices and guest satisfaction, intention to return, and recommendation intention. The correlation coefficient, ranging from -1 to +1, indicates the direction and strength of this association. Pearson’s  $r$  assumes linearity and normality, while Spearman’s  $\rho$  is a non-parametric alternative based on ranked data (Gogtay & Thatte, 2017, pp. 78–80). For this purpose, the previously formulated sum variables were used in the analysis, “Guest Participation Sustainability practices” and “Hotel Participation Sustainability practices”.

Table 13. Pearson and Spearman correlations between satisfaction with sustainability practices and guest outcome variables (n=580).

Hypothesis	Variables	Pearson’s $r$	$p$ (2-tailed)	Spearman’s $\rho$	$p$ (2-tailed)
H1	Hotel Participation Sustainability practices → Overall satisfaction	.272**	<.001	.275**	<.001
H1	Guest Participation Sustainability practices → Overall satisfaction	.215**	<.001	.236**	<.001
H2	Hotel Participation Sustainability practices → Likelihood to return	.317**	<.001	.325**	<.001
H2	Guest Participation Sustainability practices → Likelihood to return	.278**	<.001	.301**	<.001
H3	Hotel Participation Sustainability practices → Likelihood to recommend	.298**	<.001	.319**	<.001
H3	Guest Participation Sustainability practices → Likelihood to recommend	.206**	<.001	.262**	<.001

\*\*denotes statistical significancy at the 0.01 level using a two-tailed  $t$ -test.

To examine relationships between sustainability practices and guest outcomes, correlation analyses were conducted using both Pearson’s ( $r$ ) and Spearman’s ( $\rho$ ) coefficients, addressing the first three hypotheses.

The results support H1, showing significant positive correlations between sustainability practices and overall satisfaction. “Hotel Participation Sustainability Practices” showed a moderate correlation ( $r = .272$ ,  $p < .001$ ), while “Guest Participation Sustainability Practices” showed a smaller but significant correlation ( $r = .215$ ,  $p < .001$ ). This indicates that guests who

are more satisfied with sustainability practices report higher overall satisfaction, with hotel-implemented measures having a stronger impact.

For H2, the data revealed moderate positive correlations between sustainability practices and the likelihood to return. “Hotel Participation Sustainability practices” showed the strongest relationship ( $r = .317$ ,  $p < .001$ ), with “Guest Participation Sustainability practices” showing a slightly weaker correlation ( $r = .278$ ,  $p < .001$ ). Notably, these correlations were stronger than those for overall satisfaction, suggesting sustainability practices may particularly influence behavioural loyalty.

The findings also support H3, with significant correlations between sustainability practices and the likelihood to recommend. Again, “Hotel Participation Sustainability practices” ( $r = .298$ ,  $p < .001$ ) showed a stronger relationship than “Guest Participation Sustainability practices” ( $r = .206$ ,  $p < .001$ ). This suggests satisfied guests are more likely to engage in positive word-of-mouth behaviour, benefiting hotels through enhanced reputation and potential new customer acquisition. Overall, these results indicate that sustainability practices contribute meaningfully to both guest satisfaction and loyalty outcomes, with hotel-led initiatives consistently showing stronger relationships than those requiring guest participation.

While correlation analysis established the presence and strength of relationships between sustainability practices and guest satisfaction and loyalty, linear regression analysis was conducted to further examine the predictive power of these relationships. Regression analysis allows for a better understanding of how much variance in the dependent variables, which in this case are satisfaction and loyalty, can be explained by the independent variables, which in this case are sustainability practices. Linear regression was chosen as the analytical method because it provides easily interpretable results, is mathematically well-established, and works effectively even when relationships are not extremely strong (Su et al., 2012, p. 276). This approach is particularly appropriate for this study as it clearly shows how changes in satisfaction with sustainability practices relate to changes in guest outcomes.

Linear regression was used to test each hypothesis. For H1, the variables of satisfaction with sustainability practices, satisfaction with “Hotel Participation Sustainability practices” and satisfaction with “Guest Participation Sustainability practices” were used as predictors of

overall satisfaction. For H2 and H3, we tested how the same predictors influenced loyalty intentions, likelihood to return and likelihood to recommend. All regression analyses were done using SPSS and the detailed regression tables are in Appendix 2, 3 and 4.

The linear regression results for H1 showed that both sustainability practice types significantly predict overall guest satisfaction (see Appendix 2). “Hotel Participation sustainability Practices” had a stronger effect ( $\beta = .219, p < .001$ ) than “Guest Participation Sustainability practices” ( $\beta = .105, p = .023$ ). This aligns with the correlation results, confirming that sustainability measures implemented by the hotel without requiring guest effort have a greater impact on satisfaction. For H2, both sustainability practice types were significant predictors of guests’ intention to return (see Appendix 3). Similar to the correlation findings, “Hotel Participation Sustainability practices” ( $\beta = .238, p < .001$ ) showed a stronger influence than “Guest Participation Sustainability Practices” ( $\beta = .158, p < .001$ ). For H3, an interesting pattern emerged (see Appendix 4), only “Hotel Participation Sustainability practices” significantly predicted recommendation intention ( $\beta = .260, p < .001$ ), while “Guest Participation Sustainability practices” had no significant effect ( $p = .103$ ). This differs slightly from the correlation results, where both variables showed significant relationships, suggesting that when controlling for other factors, only hotel-led sustainability practices meaningfully influence guests’ recommendation behaviour.

In summary, both correlation and regression analyses provide strong evidence supporting the first research question of how sustainability practices affect guest satisfaction and loyalty. The findings consistently demonstrate that sustainability practices, particularly those implemented by the hotel without requiring guest participation, positively influence overall guest satisfaction, intention to return, and willingness to recommend. This suggests that hotels may benefit from prioritising sustainability practices that enhance the guest experience without placing additional responsibilities on guests themselves. The implications of these findings for hotel management strategies will be discussed further in Chapter 6.

## **5.5 Demographic factors’ effect on sustainability practice perceptions**

To address the second research question (RQ2: How do demographic factors affect guests’ perceptions of sustainability practices?), the following hypotheses were developed in Chapter

3. H4 posits that there are significant differences in guests' evaluations of hotel sustainability practices based on their demographic characteristics. This hypothesis aims to explore how factors such as age, gender, education level, occupation, country of residence, hotel location, or loyalty membership influence guests' perceptions of sustainability efforts. Additionally, H5 suggests that guests' perceptions of sustainability practices may vary depending on the geographical location of the hotel within Finland. The analysis of these demographic factors will provide insight into how diverse guest profiles shape their views on sustainability and help identify any significant patterns.

To ensure valid statistical analysis, the original 5-point satisfaction scale was recoded into three categories: "Dissatisfied/Neutral", combining respondents who indicated dissatisfaction or neutrality, "Satisfied," and "Very Satisfied". This recoding addressed the issue of low cell counts in the "Very Dissatisfied" and "Dissatisfied" categories, which would have violated assumptions for Chi-Square analysis while maintaining the ability to distinguish between different levels of satisfaction. The analysis of these demographic factors will provide insight into how diverse guest profiles shape their views on sustainability and help identify any significant patterns.

Table 14. Chi-Square analysis of demographic factors.

Demographic Factor	Guest Participation Sustainability practices		Hotel Participation Sustainability practices	
	$\chi^2$ (df)	p-value	$\chi^2$ (df)	p-value
Gender	11.23	.004**	0.7	.706
Age	4.19	.938	9.62	.475
Country of residence	1.28	.528	0.22	.898
Hotel region	10.09	.121	21.08	.002**
Education level	8.06	.089	22.03	<0.001**
Current occupation	4.35	.361	8.69	.069
Loyalty membership	4.18	.124	0.99	.611
Purpose of stay	0.01	.993	5.38	.068

*\*\*denotes statistical significance at the 0.01 level using a two-tailed t-test*

Table 14 presents the findings from Chi-Square analysis and from this, gender demonstrated a significant association with satisfaction regarding "Guest Participation Sustainability practices" ( $\chi^2 = 11.23$ ,  $p = .004$ ). This component includes sustainability features that require direct guest

involvement, such as skipping daily room cleaning or choosing when towels and linens are changed. This finding suggests that male and female hotel guests have significantly different satisfaction levels with participatory sustainability initiatives during their hotel stays. The statistical significance indicates this relationship is unlikely to be due to chance and aligns with previous research indicating gender differences in environmental attitudes and behaviours (Kim et al., 2017, p. 245). Supporting this, Moise et al. (2021, p. 3522) found that the relationship between sustainable practices and satisfaction was stronger for females than for males, which aligns with the results of this study. Table 15 shows that female guests reported higher satisfaction than male guests with “Guest Participation Sustainability practices”. This difference was particularly significant among very satisfied guests, of whom 46.7% were female.

Table 15. Gender differences in satisfaction with guest participation sustainability practices (n=566).

Satisfaction Level	Male (n=219)	Female (n=347)
Dissatisfied/Neutral	16.0%	9.5%
Satisfied	50.2%	43.8%
Very satisfied	33.8%	46.7%

Education level showed the strongest relationship with satisfaction regarding “Hotel Participation Sustainability practices” ( $\chi^2 = 22.03$ ,  $p < .001$ ). As shown in Table 16, guest satisfaction decreases as the education level increases. This suggests that more educated guests may have higher expectations for hotel sustainability efforts. According to Han and Kim (2010, p. 662), guests with more environmental knowledge judge green practices more critically. This supports H4, indicating that education influences how guests perceive sustainability practices.

Table 16. Education level differences in satisfaction with hotel participation sustainability practices (n=570).

Satisfaction Level	Primary/Secondary education (n=183)	Bachelor’s Degree (n=194)	Postgraduate Degree (n=193)
Dissatisfied/Neutral	31.7%	32.0%	44.0%
Satisfied	48.1%	58.2%	48.7%
Very Satisfied	20.2%	9.8%	7.3%

As shown in Table 14, hotel region appeared as a significant factor related to satisfaction with “Hotel Participation Sustainability practices” ( $\chi^2 = 21.08, p = .002$ ). The data in Table 17 reveal that satisfaction with hotel-implemented sustainability features varies significantly across different geographical areas in Finland. Pirkanmaa shows the highest satisfaction levels, while Lapland demonstrates notably low satisfaction levels. These regional variations may reflect differences in local sustainability priorities, implementation approaches, or regional guest expectations. This supports H5, which proposed that guests’ perceptions of sustainability practices would vary based on the geographical location of the hotel. The significant regional differences observed may be influenced by urban versus rural contexts, varying regional environmental policies, or destination-specific characteristics.

Table 17. Regional level differences in satisfaction with hotel participation sustainability practices (n=572).

Satisfaction Level	Uusimaa (n=143)	Lapland (n=104)	North Savo/North Ostrobothnia (n=93)	Pirkanmaa (n=232)
Dissatisfied/Neutral	32.9%	52.9%	35.5%	30.6%
Satisfied	53.1%	44.1%	50.5%	54.3%
Very Satisfied	14.0%	2.9%	14.0%	15.1%

Interestingly, several demographic factors did not demonstrate significant relationships with satisfaction regarding either type of sustainability practice, including age, country of residence, current occupation, loyalty membership, or purpose of stay. The non-significant relationship with country of residence aligns with the methodological decision to exclude detailed cultural analysis due to the predominance of Finnish respondents (93.3%) in the sample. Future research with more balanced international representation would be valuable to explore potential cultural influences on sustainability satisfaction. The lack of significance for other factors suggests that satisfaction with sustainability practices may transcend certain demographic boundaries, potentially indicating broader societal acceptance of sustainability values regardless of age or professional context. The non-significant relationship between age and sustainability satisfaction found in this study is consistent with research by Wiernik et al. (2013, p. 844), who found minimal age-related differences in environmental attitudes and behaviours. This supports a finding from this research that guests of different age groups appear to have similar levels of satisfaction with different sustainability practices.

The findings provide partial support for H4, demonstrating that certain demographic characteristics, specifically gender and education level, significantly influence guest satisfaction with sustainability practices. In contrast, other demographic factors appear to have less impact than expected. The results also strongly support H5 regarding regional variations in sustainability perceptions. These findings offer practical insights for hotel management. Rather than using one-size-fits-all sustainability approaches, hotels may achieve better guest satisfaction by tailoring their sustainability practices and communication to specific groups, particularly considering gender differences, education levels, and regional contexts.

### **5.6 Most valued sustainability practices by hotel guests**

The third research question (RQ3: “Which sustainability practices are most valued by hotel guests”), seeks to identify which specific sustainability practices are perceived as most important by guests. A hypothesis was proposed in Chapter 3 to address this question. H6 states that environmental sustainability initiatives will be rated as more important by guests than socio-cultural, economic, or communication sustainability practices. The purpose of this hypothesis is to test the relative importance that guests attach to different types of sustainability efforts undertaken by hotels.

To test this hypothesis, sustainability practices were categorised into three dimensions based on principal component analysis of responses to Question 7 of the survey (“How important are these sustainability practices to you when choosing a hotel to stay in?”). The analysis identified three distinct dimensions: environmental (3 items,  $\alpha = 0.857$ ), socio-cultural/economic (4 items,  $\alpha = 0.887$ ), and communication (2 items,  $\alpha = 0.888$ ). Composite variables were created for each dimension by averaging the items that loaded onto each component.

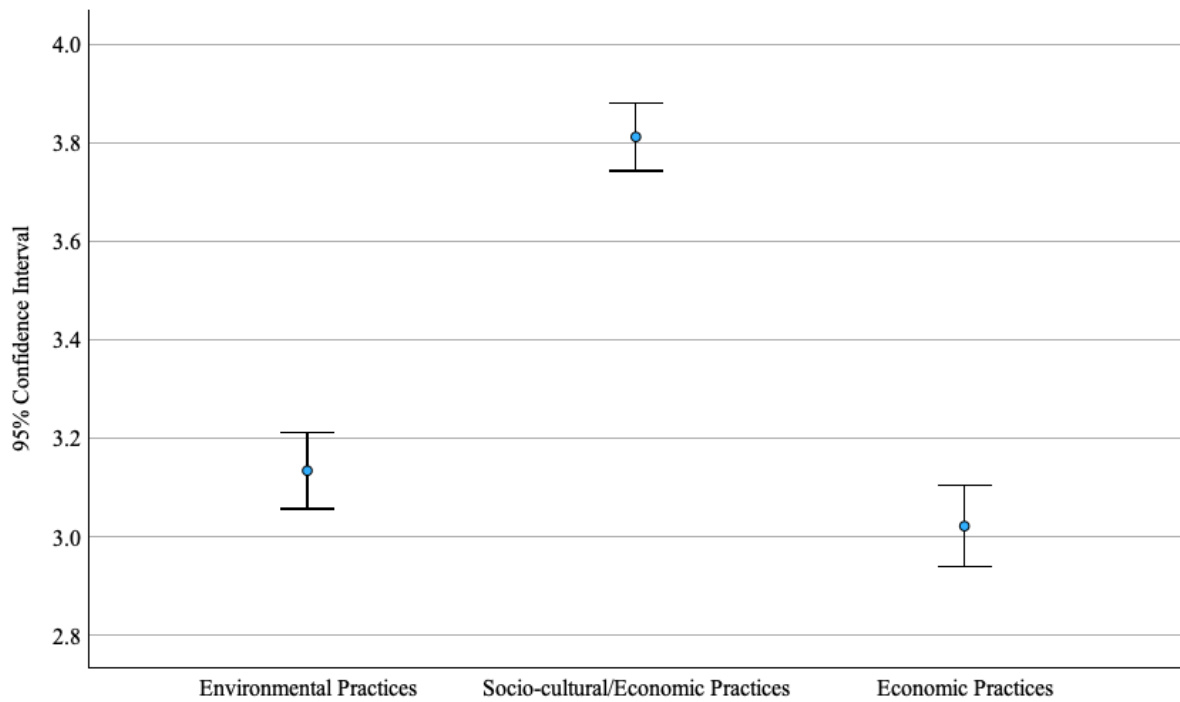


Figure 2. Guest-rated importance of sustainability dimensions.

Figure 2 presents the mean importance ratings for each sustainability dimension with 95% confidence intervals. This visualisation provides clear evidence regarding which sustainability dimensions are most valued by hotel guests. As shown in Figure 2, socio-cultural/economic practices ( $M=3.81$ ) received considerably higher importance ratings than both environmental practices ( $M=3.13$ ) and communication practices ( $M=3.02$ ). The error bars representing the 95% confidence intervals show no overlap between socio-cultural/economic practices and the other two dimensions, indicating that the differences are statistically significant. The complete descriptive statistics for these variables, including measures of distribution such as skewness and kurtosis, can be found in Appendix 5. The distance between the mean ratings of socio-cultural/economic practices and environmental practices (0.68) represents a substantial difference in guest preferences (Appendix 5). This finding contradicts H6, which predicted that environmental sustainability initiatives would be rated as more important than socio-cultural/economic practices. The error bars for environmental and communication practices show slight overlap, suggesting that the difference between these two dimensions (0.11) may not be statistically significant (Appendix 5). The clear separation of socio-cultural/economic practices in the error bar analysis provides compelling visual evidence that guests place significantly higher importance on practices like supporting local suppliers, maintaining year-round staff employment, and demonstrating commitment to the local community compared to

more purely environmental initiatives. This preference for socio-cultural/economic sustainability may reflect the Finnish cultural context, where social welfare and community wellbeing are highly valued, as well as the greater visibility and tangibility of these practices (Häikiö, 2014, p. 5646).

Socio-cultural and economic practices such as local food sourcing, staff interactions, and community partnerships are directly observable during a guest's stay, creating immediate and memorable experiences. In contrast, many environmental practices like energy management systems, behind-the-scenes waste handling, or carbon offsetting programs happen outside the guest's direct experience, potentially making them less salient in guests' evaluations. The higher rating of socio-cultural and economic practices suggests that the visibility and experiential nature of sustainability practices may significantly influence guest perceptions, with more tangible and observable practices receiving greater appreciation. For hotels, this suggests that while environmental practices remain important, greater emphasis should be placed on communicating and enhancing socio-cultural and economic sustainability efforts, especially those that guests can directly experience and observe during their stay.

## **6. DISCUSSION OF THE EMPIRICAL RESULTS**

This chapter discusses the empirical findings presented in Chapter 5, interpreting them in relation to the theoretical framework and previous research. The findings are examined in the context of the three research questions which guided this study. RQ1: “How sustainability practices affect guest satisfaction and loyalty”, RQ2: “How demographic factors influence guests’ perceptions of sustainability practices”, and RQ3: “Which sustainability practices are most valued by hotel guests.” From the total of six hypotheses formulated for this study, three were fully supported (H1, H2, H5), two were partially supported (H3, H4), and one was rejected (H6). This discussion highlights the theoretical contributions of the research and its practical implications for the Finnish hotel industry.

### **6.1 Sustainability practices’ impact on guest satisfaction and loyalty**

The empirical results demonstrate a positive relationship between sustainability practices and guest satisfaction, with hotel-led practices showing stronger effects than those requiring guest participation. This supports earlier findings by Merli et al. (2019, p. 174) who found that sustainable hotel practices improve how guests value their stay, which then leads to higher satisfaction and makes guests more likely to return to the hotel in the future.

The first hypothesis (H1), that there is a positive relationship between hotel sustainability practices and overall guest satisfaction, is supported by this study. Both correlation and regression analyses revealed significant positive relationships between satisfaction with sustainability practices and overall guest satisfaction. Specifically, “Hotel Participation Sustainability practices” showed a moderate positive correlation with overall satisfaction, while “Guest Participation Sustainability practices” showed a smaller but still significant correlation. This finding aligns with Moise et al. (2021, p. 3525), who discovered that sustainable hotel practices enhance guests’ perceptions of their stay, resulting in higher satisfaction and a greater likelihood of future return visits.

The second hypothesis (H2), that guest satisfaction with sustainability practices is positively correlated with guest intention to return to the hotel, is supported. Both “Hotel Participation” and “Guest Participation Sustainability practices” were significant predictors of guests’

intention to return. “Hotel Participation Sustainability practices” showing a stronger relationship than “Guest Participation Sustainability practices”. This finding is consistent with Berezan et al. (2013, p. 229), who found that “there is a positive relationship between guests’ intention to return and hotel sustainability practices,”. This highlights how sustainability efforts can increase guest loyalty and repeat visits.

The third hypothesis (H3), that guest satisfaction with sustainability practices positively correlates with guests’ willingness to recommend the hotel to others, is partially supported. While correlation analyses showed significant relationships for both sustainability practice types, regression analysis revealed that only “Hotel Participation Sustainability practices” significantly predicted recommendation intention, while “Guest Participation Sustainability practices” had no significant effect. This suggests that, only hotel-led sustainability practices meaningfully influence guests’ recommendation behaviour. This finding adds a point to previous research by Han et al. (2011, pp. 345-346), who found that hotels that prioritise sustainability are more likely to receive positive word-of-mouth recommendations.

The results clearly show differences between “Hotel Participation Sustainability practices” and “Guest Participation Sustainability practices.” Hotel-led sustainability practices, which guests can experience without active participation, create higher overall satisfaction than practices requiring guest effort. The study reveals that sustainability practices have varying effects on loyalty. “Hotel Participation Sustainability practices” influence both guests’ intention to return and their willingness to recommend the hotel, while “Guest Participation Sustainability practices” only affect return intention. This suggests guests think differently about sustainability when deciding to return themselves versus recommending a hotel to others. Interestingly, sustainability practices showed a stronger connection to return intention than to overall satisfaction. This challenges the common understanding of how satisfaction leads to loyalty and supports Moise et al.’s (2018, p. 94) finding that sustainability can directly increase loyalty regardless of satisfaction levels. As Han et al. (2019, p. 25) suggest, hotels should consider this when developing loyalty strategies. The different effects of sustainability practices on loyalty dimensions reveal important patterns in guest thinking. Guests seem willing to consider sustainability practices when planning their own return visits but are less likely to factor them into recommendations to others. This insight helps hotels better design sustainability strategies to build guest loyalty.

## **6.2 Demographic factors' influence on sustainability perceptions**

The fourth hypothesis (H4), that guests with different demographic characteristics show significant differences in their evaluation of hotel sustainability practices, is partially supported. The analyses revealed that gender significantly influenced satisfaction with “Guest Participation Sustainability practices,” with female guests reporting higher satisfaction levels than male guests. Similarly, education level was significantly associated with satisfaction regarding “Hotel Participation Sustainability practices,” with satisfaction decreasing as education level increased. The analysis revealed that demographic factors, including age, country of residence, occupation, and purpose of stay, did not exhibit significant relationships with sustainability satisfaction. The gender difference found in this study supports the findings of Kim et al. (2017, p. 245), who found that men and women often have different environmental attitudes and behaviours, with women showing more concern for the environment. This is also in line with Moise et al. (2018, p. 92), who discovered that female hotel guests are more likely to appreciate and respond positively to sustainability practices.

The fifth hypothesis (H5), which states that guests' perceptions of sustainability practices vary significantly depending on the geographical location of the hotel in Finland, is supported. The analyses revealed significant regional differences in satisfaction with “Hotel Participation Sustainability practices,” with guests in Pirkanmaa reporting the highest levels of satisfaction and those in Lapland reporting lower levels. This finding aligns with Cornelisse (2020, p. 53), who found that interpretations of sustainability in Finland vary by region. This confirms research by Tideswell and Fredline (2004, pp. 205–206) on the importance of local contexts in shaping guest perceptions and supports the need for regionally adapted sustainability approaches.

The negative relationship between education level and satisfaction with hotel-led sustainability practices suggests that more educated guests may have higher expectations or more critical evaluations of hotel sustainability efforts. This finding extends Han and Kim's (2010, p. 662) observation that guests with more environmental knowledge judge green practices more critically, providing empirical evidence for this relationship. The significant regional variations in satisfaction with hotel-led sustainability practices support the hypothesis that geographical location influences perceptions of sustainability practices. This finding confirms the importance

of considering regional contexts when implementing sustainability strategies. The higher satisfaction levels observed in the Pirkanmaa region compared to Lapland may reflect differences in implementation approaches, guest expectations, or the alignment between regional sustainability priorities and hotel practices.

### **6.3 Most valued sustainability practices**

The sixth hypothesis (H6), that environmental sustainability practices are rated as more important to guests than socio-cultural, economic, or communication sustainability practices, is rejected. The results were different from expected, with socio-cultural and economic practices receiving significantly higher importance ratings than both environmental and communication practices.

This finding challenges assumptions in previous research (Han, 2021, pp. 1023-1024; Bruns-Smith et al., 2015, pp. 4-5) that environmental practices are the most valued aspect of hotel sustainability. The preference for practices supporting local communities, providing year-round employment, and sourcing local products suggests that guests prioritise sustainability practices with visible social and economic impacts over more abstract environmental benefits. This finding contributes to the theoretical understanding of sustainability perceptions by highlighting the role of tangibility and direct guest experience in shaping evaluations. Socio-cultural and economic practices such as local food sourcing and community partnerships are directly observable during a stay, creating immediate and memorable experiences. In contrast, many environmental practices operate behind the scenes, potentially making them less noticeable in guests' evaluations. This aligns with Häikiö's (2014, p. 5646) observation about the high valuation of social welfare and community wellbeing in Finland.

The practical implication of this finding is significant for hotels seeking to enhance guest perception of their sustainability efforts. While environmental practices remain essential for reducing ecological footprints, hotels may achieve greater guest appreciation by emphasising and communicating their socio-cultural and economic practices, particularly those that guests can directly experience during their stay. Communication practices need to be in line with this, as it could be more beneficial to highlight the socio-cultural and economic ones over the purely environmental ones.

## **6.4 Theoretical and practical implications**

This research adds to tourism literature by showing how sustainability practices relate to guest satisfaction and loyalty in Finland. The study offers several key insights.

First, there are clear differences between how hotel-led and guest participation sustainability practices affect satisfaction and loyalty. Practices that require guest effort have less impact than those managed entirely by the hotel. Second, guests value socio-cultural and economic sustainability practices more than environmental ones, challenging common assumptions in the field. This suggests that sustainability preferences depend more on context than previously thought. However, rating these practices as important may not necessarily translate to actual guest behaviour. Third, the differences found across demographic groups and regions support a more targeted approach to sustainability, rather than treating all guests the same. For hotel management, these findings suggest prioritising sustainability practices that do not require guest participation, as these create stronger satisfaction and loyalty. Hotels should emphasise socio-cultural and economic practices that guests can directly experience during their stay. The demographic differences offer opportunities for targeted communication, while regional variations suggest adapting sustainability approaches to local contexts rather than using a single standard approach everywhere. This supports Uslu et al.'s (2020, pp. 2–3) recommendation that sustainable tourism development should consider regional cultural differences.

In summary, while comprehensive sustainability strategies remain important, hotels should carefully select which practices to prioritise and how to communicate them to improve guest satisfaction and loyalty best.

## **7. SUMMARY**

This chapter provides a comprehensive summary of the research findings on how sustainability practices affect guest satisfaction and loyalty in the Finnish hotel industry. It discusses the theoretical contributions and practical implications of these relationships, acknowledges the limitations of the study, and offers suggestions for future research.

### **7.1 Conclusion and implications**

This study examined how sustainability practices affect guest satisfaction and loyalty in Finnish hotels. It looked at which sustainability practices guests value most, how demographics influence these perceptions, and whether specific practices have a greater impact on hotel selection. The research analysed 580 survey responses from guests of a Finnish hotel group.

The findings showed positive relationships between sustainability practices and guest satisfaction, with hotel-led practices having stronger effects than those requiring guest participation. This suggests that sustainability measures that do not require guest effort are better at improving overall satisfaction. Similarly, both types of sustainability practices influenced guests' intention to return and willingness to recommend the hotel, with hotel-led practices again showing stronger effects. Interestingly, both types of sustainability practices predicted guests' intention to return, but only hotel-led practices significantly predicted recommendation behaviour. This suggests that when recommending hotels to others, guests mainly consider sustainability practices that do not require extra effort, while they may base their own return decisions on practices they participate in.

Gender and education affected how guests viewed sustainability practices. Female guests were more satisfied with guest participation practices than male guests. Guests with higher education levels reported lower satisfaction with hotel-led practices, suggesting they may have higher expectations or more critical views of hotel sustainability efforts. The study found important regional differences in satisfaction with hotel-led sustainability practices. Guests in Pirkanmaa reported the highest satisfaction levels, while those in Lapland reported lower levels. This supports Cornelisse's (2020, p. 53) finding that sustainability interpretations vary by region in

Finland, with different areas prioritising business-focused or environmentally focused approaches.

Perhaps the most surprising finding was that guests rated socio-cultural and economic practices as significantly more important than environmental and communication practices. This challenges the common belief that environmental practices are what guests value most. Guests preferred practices that support local communities, provide year-round employment, and source local products, suggesting they value visible social and economic impacts over less obvious environmental benefits.

These findings have practical implications for hotel management. Hotels should focus on sustainability practices that do not require guest participation, as these have stronger links to satisfaction and loyalty. They should emphasise socio-cultural and economic efforts, especially those that guests can directly experience. Different guest segments may need different communication approaches. Finally, hotels may benefit from adapting their sustainability approaches to local contexts rather than using the same strategies everywhere. This matches Uslu et al.'s (2020, pp. 2–3) recommendation that sustainable tourism development should consider regional cultural differences.

## **7.2 Limitations**

The limitations of this study are as follows. First, the majority of respondents were Finnish, which limits insights into how cultural factors might influence sustainability perceptions. Second, data were collected during a single period (January–February 2025) and may not reflect seasonal variations in guest perceptions. Third, self-reported data may be subject to social desirability bias, where respondents overstate their appreciation of sustainability due to social pressure, as noted by Zerbe and Paulhus (1987, p. 251). Fourth, the study focused on a single hotel group in Finland, which limits the applicability of the findings to other hotel contexts. Finally, relying solely on a quantitative approach may miss some of the nuanced ways in which guests perceive sustainability. Incorporating qualitative methods could provide richer insights into guests' values, motivations and expectations of sustainable practices.

### **7.3 Suggestions for future research**

This study suggests several directions for future research. First, studies with more international participants could show if cultural background affects how guests view sustainability. This would reveal whether the preference for socio-cultural and economic practices is unique to Finland or common elsewhere. Second, research tracking guests over time would better show cause-and-effect relationships. This could determine if sustainability practices have lasting or diminishing effects on loyalty. Third, adding interviews and focus groups would help explain why guests prefer certain sustainability practices. This could clarify why socio-cultural and economic practices rated higher than environmental ones. Fourth more studies within different Finnish regions could explain the differences found between Pirkanmaa and Lapland. This could show how local culture shapes sustainability expectations. Fifth, comparing different types of hotels would reveal if these findings applied across the industry. This would help create better sustainability recommendations for different hotel categories. These research directions would improve our understanding of how sustainability practices affect guest perceptions and behaviour, assisting hotels in developing more effective strategies.

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## APPENDIX 1. Survey

Mandatory questions are marked with an asterisk (\*)

Dear Respondent,

This survey is part of a Master's Thesis conducted by Tiia Viherranta under the supervision of Professor Markku Vieru at the University of Lapland, Finland. The thesis aims to explore how hotels' sustainability practices influence guest satisfaction and loyalty.

By completing this survey, you consent to your anonymous responses being used solely for research purposes. Participation is voluntary, and you may withdraw at any point before submission.

This research adheres to the guidelines set by the Finnish National Board on Research Integrity (TENK).

The findings will be published in the thesis for the Master's Programme in Tourism, Culture, and International Management.

If you have any questions, please contact:

Tiia Viherranta  
tvihera@ulapland.fi

By starting the survey, you confirm your consent to participate.

Thank you for your valuable contribution!

**1. I consent to participate in this research and allow my responses to be analyzed. \*If you do not consent, you may not proceed with the survey. \***

Yes

No

### Your Stay at Hotel Group A

**2. What was the main purpose of your stay?**

Leisure/Holiday

Business

Other, please specify \_\_\_\_\_

**3. Have you stayed at Hotel Group A before?**

- No, this was the first time
- Yes, 1-2 times
- Yes, 3-5 times
- Yes, over 5 times

**4. How long was your stay?**

- 1 night
- 2-3 nights
- 4-7 nights
- More than 7 nights

**5. At which Hotel Group A location did you stay during your visit?**

- Location 1
  - Location 2
  - Location 3
  - Location 4
  - Location 5
  - Location 6
  - Location 7
  - Location 8
  - Location 9
  - Location 10
  - Location 11
  - Location 12
  - Location 13
  - Location 14
  - Location 15
  - Location 16
  - Location 17
  - Location 18
  - Location 19
  - Location 20
  - Multiple hotels during my stay
  - I don't remember
-

**6. How important were these factors in choosing Hotel Group A \***

	Not at all important	Slightly important	Fairly important	Important	Very important
Hotel Location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand reputation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety and Security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accessibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability Practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability Certifications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviews and Ratings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loyalty Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**7. How important are these sustainability practices to you when choosing a hotel to stay in? \***

	Not at all important	Slightly important	Fairly important	Important	Very important
Use of 100% green electricity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel's waste recycling and sorting practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of local food producers and suppliers and repurposing food waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel employs staff year-round and invests in staff training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel sources products from local suppliers and collaborates with sustainability-focused partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long-term commitment to the local community, including partnerships with organizations like Metsähallitus for sustainable tourism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel's circular economy practices (e.g., recycling of furniture and textiles)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear communication about sustainability practices on hotel website and booking platforms (e.g., certifications, environmental initiatives, sustainability commitments)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel's public reporting of sustainability results (e.g., environmental impact data, energy consumption figures, waste management outcomes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. Would you be willing to pay a bit more to stay at a hotel that: \***

	No	Maybe	Yes
Uses 100% renewable energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supports local businesses and preserves local culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actively reduces waste and provides comprehensive recycling facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Follows sustainable food practices (e.g. grows its own herbs and uses local produce)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintains and renovates existing buildings to maintain their usability and extend their lifespan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prioritizes staff wellbeing and fair employment, and partners with sustainable suppliers & partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensates for carbon emissions (e.g. through carbon offset programs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Holds recognized Sustainability Certifications (e.g., Sustainable Travel Finland, EcoCompass)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. In your home country, how common are hotels that focus on being environmentally friendly?**

- Not common at all
- Somewhat common
- Very common
- I'm not sure

**10. How satisfied were you with your overall experience? \***

	1	2	3	4	5	
Very dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

**11. How satisfied were you with the following sustainable features during your stay? \***

	Very dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Digital alternatives to physical or paper materials (e.g., digital keys and electronic guides)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The hotel's waste recycling and sorting practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water-saving toilets, faucets and showerheads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Waste sorting and recycling facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option to skip daily room cleaning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Towels and linens changed on request only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refillable bathroom amenities (soap & hair care products)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locally sourced and seasonal food available at the hotel's restaurants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information about sustainable tourism and local culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accessible and easily available eco-friendly transport options (e.g. electric shuttle buses, bike rentals, and public transport)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12. How likely are you to return to this hotel for future stays?**

	1	2	3	4	5	
Extremely unlikely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Extremely likely

**13. Does the hotel's sustainability practices influence your likelihood to return?**

	1	2	3	4	5	
Not at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very significantly

**14. Please rate your likelihood to: \***

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Recommend this hotel to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Say positive things about this hotel to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share positive experiences about this hotel's sustainability practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommend this hotel for its sustainability practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Open Feedback**

**15. What could the hotel do better?**

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**16. Any additional comments about sustainability practices at Hotel Group A?**

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**Background information**

**17. Age \***

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or over

**18. Are you a member of the Hotel Group A Loyalty Club? \***

- Yes
- No

**19. Gender \***

- Male
  - Female
  - Non-binary
  - Other
  - Prefer not to say
- 

**20. Country of residence**

**21. The highest degree or level of school completed. If currently enrolled, highest degree received \***

- Primary education
- Secondary education
- Bachelor's degree
- Master's degree
- Doctoral degree
- Other professional qualification
- Other

**22. Current occupation \***

- Full-time employee
- Part-time employee
- Self-employed
- Student
- Retired
- Unemployed
- Other (please specify) \_\_\_\_\_

**23. To enter the raffle, please provide your email address**

Email \_\_\_\_\_

## APPENDIX 2. Linear Regression Results for H1

Coefficients<sup>a</sup>

Model	Unstandardized		Standardized		Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	
1(Constant)	3.359	.170		19.758	<.001
Guest Participation Sustainability practices	.095	.042	.105	2.278	.023
Hotel Participation Sustainability practices	.196	.041	.219	4.732	<.001

a. Dependent Variable: Overall experience satisfaction

### APPENDIX 3. Linear Regression Results for H2

Coefficients<sup>a</sup>

Model	Unstandardized		Standardized		Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	
1(Constant)	2.909	.190		15.313	<.001
Guest Participation Sustainability practices	.163	.047	.158	3.489	<.001
Hotel Participation Sustainability practices	.243	.046	.238	5.250	<.001

a. Dependent Variable: Likelihood - Return to hotel for future stays

### APPENDIX 4. Linear Regression Results for H3

Coefficients<sup>a</sup>

Model	Unstandardized		Standardized		Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	
1(Constant)	3.061	.198		15.488	<.001
Guest Participation Sustainability practices	.080	.049	.075	1.632	.103
Hotel Participation Sustainability practices	.273	.048	.260	5.662	<.001

a. Dependent Variable: Likelihood - Recommend this hotel to others

## APPENDIX 5. Descriptive Statistics for Sustainability Dimensions

### Descriptives

		Statistic	Std. Error	
Environmental Practices	Mean	3.1333	.03925	
	95% Confidence Interval for Lower Bound		3.0563	
	Mean	Upper Bound	3.2104	
	5% Trimmed Mean		3.1507	
	Median		3.0000	
	Variance		.893	
	Std. Deviation		.94517	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-.234	.101
	Kurtosis		-.311	.203
	Socio-Cultural/Economic Practices	Mean	3.81121	.035146
95% Confidence Interval for Lower Bound		3.74218		
Mean		Upper Bound	3.88024	
5% Trimmed Mean		3.87021		
Median		4.00000		
Variance		.716		
Std. Deviation		.846436		
Minimum		1.000		
Maximum		5.000		
Range		4.000		
Interquartile Range		1.250		
Skewness		-.912	.101	
Kurtosis		1.129	.203	
Communication Practices		Mean	3.0207	.04226
	95% Confidence Interval for Lower Bound		2.9377	
	Mean	Upper Bound	3.1037	
	5% Trimmed Mean		3.0230	

Median	3.0000	
Variance	1.036	
Std. Deviation	1.01776	
Minimum	1.00	
Maximum	5.00	
Range	4.00	
Interquartile Range	2.00	
Skewness	-.067	.101
Kurtosis	-.403	.203